

The  
National  
Locksmith

August 1998  
Volume 69  
No. 8  
\$5.00

New Monthly Feature:  
**FREE CODE CARDS!**  
see inside.

# The National Locksmith®

*Stepping  
Through  
The  
World Of*  
**ELECTRONIC  
SECURITY**

see page 20

**ISC  
EAST**

September 1-3, 1998

**New York**

page 50

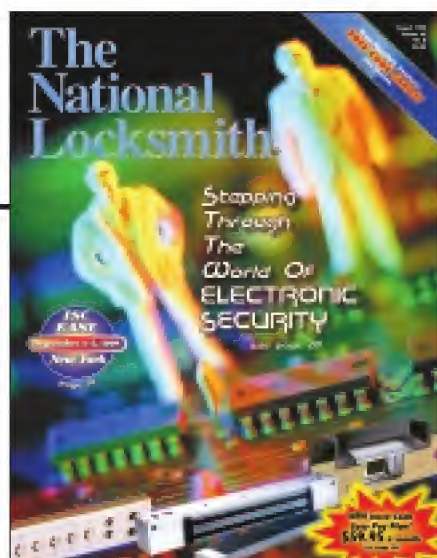
**NEW Insta-Code  
Easy Pay Plan!**

**\$59.95 a month**

(see page 79)



## On The Cover...



Navigating your way through the field of electronic security requires even more expertise and product knowledge than ever before.

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# COMMENTARY



<http://www.TheNationalLocksmith.com>  
User name: national User ID: G5fh84

## Lots of news from The National Locksmith

**Y**ou asked for it, so in this case, at least, you got it! Ever since we introduced the INSTA CODE software, we have received an awful lot of requests for a payment plan to make it easier for locksmiths to purchase the program.

We know that many of you are very interested in acquiring this product even though you may already have other software. And a payment plan will make this purchase easier for you.

Therefore, we've introduced the INSTA CODE Easy Pay Plan. You pay just \$59.95 a month for twelve months. You can pay by regular debits to your credit card or by checks.

We now accept almost every credit card known to man, including Visa, MasterCard, Discover and American Express. This should make your purchase of INSTA CODE much easier to hide from your spouse! And of course, you may pay with checks if you prefer.

To get more information on the Easy Pay Plan, just call us at 630-837-2044, or clip the coupon from this month's software ad, found on pages 79-82. The sign up form is written in plain English, and only takes 30 seconds to fill out. You get the form from us, fill it out and return it with your first payment, and we send you the complete INSTA CODE program. That's all there is to it!

So make just your first payment of \$59.95 and you'll be looking up codes, printing out code cards and printing out your own code books just days later with INSTA CODE!

**A**n important new feature launched in last month's issue of The National Locksmith. We now print the proper code card for the code series we publish in the magazine each month. Just carefully clip these cards out of the magazine, and use them in your 1200CM™ code machine.

No longer do you have to wait until the card becomes commercially available. Right from its publication date, you'll be prepared to make keys by code.

We like this idea so much that we're also including a second bonus card in each edition of The National Locksmith. This month's cards can be found bound into the issue between pages 134 and 137. Clip 'em out, and be the first locksmith on your block to collect them all! These cards are sponsored by our INSTA CODE software.

**I**f you do a whole lot of automotive locksmithing, you might be interested in joining the National Locksmith Automobile Association (NLAA). Membership is \$125, and among other benefits, you receive our Automotive Edge newsletter.

The newsletter has just gone monthly and covers a new car in extreme detail every month.

We still cover cars in the magazine more and better than anyone. But for those car junkies, the NLAA is your fix.

*Marc Goldberg*



### Join our free E-mail list!

Receive locksmith info by E-Mail  
Write us at: NATLOCK@aol.com

**Marc Goldberg**  
Publisher

August 1998 • 5



# Mango's Message

## Help Wanted

**C**onsumer confidence in the economy rose in June to a 29-year high, as Americans remain optimistic that the strong labor market and healthy economic growth will continue in coming months. According to the "The Conference Board," a private research group, the strong American job market continues to fuel consumer optimism with little letup in sight.

This optimistic economic forecast is good news for consumers, service providers and manufacturers. As the economy grows, individual spending rises creating greater demand for consumer goods and services, which in turn increases employment opportunities. Should your company be one of the fortunate ones experiencing growth due to the bull market, and need to expand operations to meet customer demands, the next trick is to find good people to fill those employment opportunities.

Recently, The National Locksmith was interviewing prospective candidates to fill a position that required interacting and assisting myself as well as the sales & marketing staff with daily tasks. As one who has been in the dubious position of being on both sides of the employment desk — as an interviewee and interviewer — I can tell you I much prefer being the interviewer. There are few situations in life that can cause an individual's heart to palpitate faster, pores to excrete sweat more profusely, or nerves to be more tense, than going on a job interview — except of course, shopping for a new car.

As a job interviewer, there are particular criteria desired of the employee seeking the job. Some of mine are:

- High moral and ethical values.
- Masters degree with a GPA of 3.75 or better.
- Clean, well dressed and groomed.
- Gregarious outgoing personality.
- Have excellent communication skills.
- Bi Lingual with any additional languages a plus.
- Must have won the Miss America or Mr. (just to be politically correct) Universe pageant within the last five years.
- Willing to subject oneself to a sodium pentothal and lie detector test.
- Non smoker, drinker or drug taker.
- Type 350 words per minute.
- Know shorthand

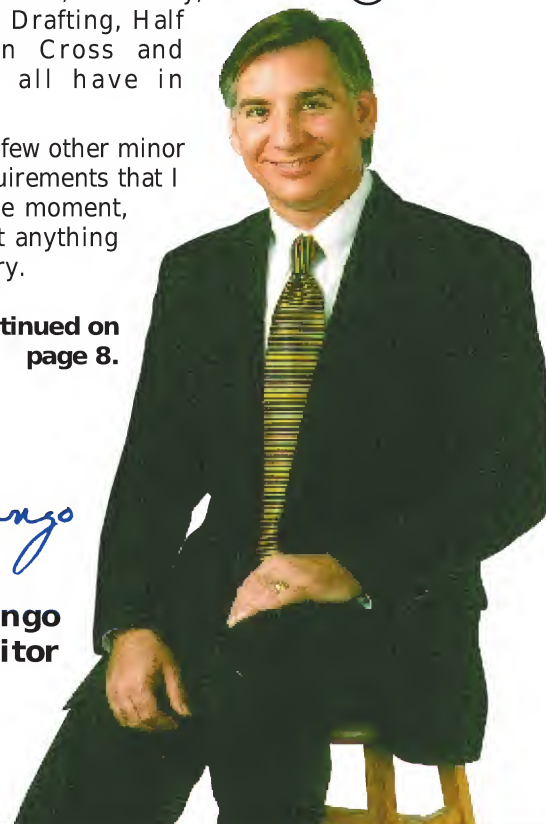
- Able to take dictation
- Must have taken Dale Carnegie's "How to Win Friends and Influence People" course as well as Evelyn Woods "Speed Reading" courses.
- Computer literate on both IBM Personal Computers as well as Apple Macintosh formats.
- Have a phone and pager for 24 hour communication.
- Willing to work long hours, nights and weekends.
- Have no social life other than work.
- Be willing to travel.
- Agree to return any extra proceeds back to the company to insure future revenue.
- Be compassionate, warm and charming.
- Ability to perk the perfect cup of coffee.
- Must know what a Slap Shot, Triple, Free Throw, Hail Mary, Love, Birdie, Drafting, Half Nelson, Iron Cross and Bodacious, all have in common.

There were a few other minor qualification requirements that I can't recall at the moment, but they weren't anything out of the ordinary.

Continued on  
page 8.

*Greg Mango*

**Greg Mango**  
Editor





# Mango's Message

Continued from page 6

**Y**ou would think that given the number of people out of work plus those looking to improve their working conditions or opportunities, that it would be easy to find a qualified candidate for a given job. Think again. We received numerous résumés and it's quite alarming how many are thrown in the garbage can and how few are considered.

Many candidates are rejected because their qualifications don't meet our requirements. For the life of me I don't know why! O.K., I'll admit that my expectations may be a tad high, and maybe the job applicant doesn't need to know that a Slap Shot, Triple, Free Throw, Hail Mary, Love, Birdie, Drafting, Half Nelson, Iron Cross and Bodacious, are all sports terms — well, except for Bodacious, that means like Gnarly, The Bomb, Chillin', Doing the Do, Hanging, Dude, Coolio, — you now what I mean? When you're offering a minimum wage salary, however, you want to be sure to get your money's worth.

Many candidates are rejected because of common errors found on their résumé that stand out like a sore thumb. Errors such as:

- Hand written résumés.

This should never be done, but when it's written in a foreign language it poses a particular problem.

- Hand written notes on a typed résumé.

That's bad enough, but when the notes are a grocery list! I'll admit though, the T-bone steaks did make my mouth water.

- Using White-Out to cover unwanted information.

One guy tried to cover his salary requirements because they were less than we were offering.

- Crossing out a misspelled word and then writing in the correct spelling.

The real kicker is when the corrected spelling is still incorrect.

- Using the prior or current employer's stationery to do the résumé on and then sending it in the company's envelope.

Cheap people. Go figure.

- Misspelled words.

I gess we all do that once in a while.

Those are the most common mistakes we see on résumés that are sure to eliminate a candidate. Then you get the more extreme résumé no-no's, such as:

- Including a cover letter with love and peace stickers on it.

They could at least use something current like Beanie Baby stickers.

- Writing in crayon.

If you're going to use crayons, don't use orange, purple and green together like a rainbow. At least stick with one color.

- Listing previous job experience as a pan handler.

You have to give me more experience qualifications than that, like pan handling and drug dealing or pan handling and bank robbing.

- Listing current address as the county jail.

Wasn't looking for someone with detention lock experience at this time. Sorry.

And last but not least, if you're going to write your résumé on a restaurant napkin, please have the courtesy to use a clean one.

Once we weed through the dozens of résumés, then it's time for the personal interview with the few we thought might qualify. This is usually when the final few fall on their face, for reasons such as:

- Arriving to the interview in shorts and sandals.

If you're going to do that, at least wear a T-shirt and leave the sun glasses in the car.

- Arriving with a parrot on your shoulder.

That's fine, but when the parrot starts making salary and vacation demands, I draw the line.

Then we give each job applicant a basic skills test.

We start off with the ABC's.

Then we do some basic arithmetic like  $1+1=?$   $6+3=?$   $4 \times 2=?$

By now we have eliminated about half our candidates.

**W**hen you do job interviews, you have to wonder how the larger companies can even find enough qualified people to fill their work force demands. Probably the number one complaint from companies that I get is they can't find good people. I now know why. There are a number of locksmith companies in the industry that are currently looking for a few good men and women, who claim they can't find dependable, conscientious candidates.

On the other side of the coin, I talk with locksmiths looking for work who claim they can't find a good company. It's a vicious circle and there are legitimate claims on both sides.

Every now and then that shining star will appear. However, finding them is like excavating for diamonds. You have to dig and dig and dig. **TNL**





August 1998

# Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

## Officer to the Rescue

The other day I watched a Fairview Heights community service officer open a car that a lady locked the keys in.

Officer Cindy Fietsam first tried a homemade Slim Jim in the passenger door using the random excessive thrusting method. Then the lady noticed that her driver's window was down just enough that the power lock button could be hit with the Slim Jim. Officer Fietsam did not ask to see any ID, and did not get a tag number, registration number, or VIN number off the car; as required by law.

When I talked with Officer Fietsam after this I was told, "The department has gotten around the law and will continue to provide this service within the city. If I can't open the car with the Jim then we call a locksmith."

I don't know if the Department of Professional Regulation will do anything, but I plan to tape some friends stealing cars with the help of

the police. Maybe seeing the tape will show them why the law was passed and that they are breaking it.

*Rodger Long  
Illinois*

## Skin Them Alive

I just read Mango's Message (June 1998), and have to agree. I have been in this trade for 19 years and have seen this happen, especially at trade shows.

Manufacturers and distributors go to great lengths, expense and preparation to give us their best, and I agree, this is an individual that our industry can do without. If he does these things within his trade, I can just imagine what he does to the public.

When I go to my distributor I always make sure that the truck is locked because other locksmiths come here. My distributor always thought I was joking, until he read this article.

I have been to distributors seminars and classes that are presented to further our education, and their supplies are roped off to prevent stealing. How sad.

So, what is the answer? I believe that if a locksmith steals from the public by means of his cunning, he should be flogged. If he steals from a fellow locksmith, however, he should be skinned alive.

All I can say to these individuals is SHAME ON YOU. Because they are not stealing from a manufacturer or a distributor, they are stealing from us. They are stealing our trust.

I have a bumper sticker that says: Trust Your Locksmith not Thrust Your Locksmith.

*Ralph B. Martinez  
Texas*



## Doctor in the House

Over a year ago I was solicited to do work in my area for "Door Doctor of North America." After agreeing to my terms for open accounts net 30, they began calling me.

I want my associates to know that I have done 15 jobs for them now and have heard every story in the book. Phone calls are never returned, promises are broken and many hours of chasing them down have been spent.

They have never once paid on time, more often 90-120 days. The last job was for \$278.00 and completed February 10th (almost 4 months ago).

They have been put on notice that I will no longer accept work from them. Who needs the hassle?

Have they called you yet? I'm sure they will get around to you sooner or later.

*Tim Nycum  
Michigan*

**The National Locksmith**  
1533 Burgundy Parkway  
Streamwood, IL 60107  
Attn: Editor



Continued from page 10

## Was it a Locksmith?

I just read Mango's Message (June 1998), about being ripped off. I agree that it is most disheartening and depressing to be violated by the ones you trust most.

However, I wonder if your blame might be mistaken. I have attended many trade shows and training seminars, etc. I have been in the locksmith trade for 20 years and have seen quite a bit: the part timer, the big wigs, the hard working stiff, the well dressers and the slobs. One thing we all have in common is that we love this trade. If we didn't, who would put the money and sweat we do into a trade?

I am not discounting your suspicions of a locksmith walking off with these products, but please let me suggest one alternative. Professional thieves. Just think about your commercial customers and reflect. This is their every day nightmare. Ask anyone who has had their truck or shop hit by thieves. There is a market for every imaginable item including code books and other locksmith items.

I think the real problem may be the lack of pre-registering and confirming identification of those attending. I have many times, looked around and seen people that "didn't fit in." After all, we are often imparting information and demonstrating equipment that no one outside of the locksmith trade has any business knowing and seeing.

I guess this makes a good argument for licensing. At least you could reasonably verify to whom you are speaking to and training.

Steve Phillips  
Illinois

## Commission of a Felony

This is in response to Bill Stillwater's letter regarding "Pick Guns and Realtors" (June 1998).

It always gives me a great sense of pride when a constituent of the security industry poses a good question, and it has since I became a "bonafide locksmith" in 1986.

Only bonafide locksmiths, dealerships (auto), distributors, and manufacturers are authorized to sell to us any device that will manipulate

such device in to open position, other than a customer's key. The U.S.A penalty for the possession of such device, if not bonafided, is one year in prison, a thousand dollar fine, and/or both.

So who's liable? The Realtor, since not only is this realtor in commission of a felony (federal) but this Realtor by non professional use caused damage to the normal functional operating of the locking device. For more information request a copy of this law from Congress. I did.

Willie Bowen  
Virginia

## Couldn't Agree More

Just received the June issue of *The National Locksmith*. I wanted to let you know that I totally agree with Greg Mango's article "Sticky Fingers." I have heard the same thing from some of the distributors.

I think it would be a good idea to have security people check bags, backpacks, etc. Also prosecute the thieves to the max. We do not need people like that. That's my two cents worth!

Steve  
Milhorn's Mobile Lock Shop

## Key Blank Memorial

As a subscriber of *The National Locksmith* since 1985, I would like to use this opportunity to place a letter in the editorial section in reference to the Princess Diana charities.

We have produced a coined Yale key blank of the most common section, or profile used in the U.K. It consists of a coin on one side saying "The People's Princess Diana 1961-1997," the reverse side says "For charity and a Locksmith's tribute." We are selling the blank for £12.00 per 100 plus local tax, which I think is possibly refundable if blanks go to the States. £3.00 goes to the Princess Diana charities.

The blank is probably not much use in the U.S., but from a collectors point of view might be very collectable.

My company Market Lock & Safe is administrating this product free of charge with the aid of U.K. Davenport Burgess, who are supplying the coining free of charge. When the project is finished I will forward a check to

the charities which will be presented in the U.K. I will obviously contact *The National Locksmith* on the final outcome of how much money was raised and handed over to charity.

I have sold 20,000 blanks so far, and to my knowledge I am the only person doing this type of activity towards the Princess charities from the Locksmith world. Hopefully your worldwide presence will attract some sales from places as far as Australia, New Zealand and Europe.

Some of the Locksmith Associations in America might like to purchase blanks and share them amongst their members. I am located at 9 Vessey Path, Chrisp Street Market, LONDON E14 6BT, Phone: 0171-538-4161. G. Watts  
London

## The Fight is Over

Good news. After three years of fighting the system in an effort to help educate and prevent people from having illegal burglary tools, I'm pleased to announce that I am giving up. I've talked or communicated with everyone from the US Attorney General to the Postmaster General. I've made flyers to give out locally to people I service, communicated with our Senator, and have provided one roadside service with our laws on these tools and books.

Talk about beating your head against the wall. I've only had one minor victory and that was printed in your magazine. I have totally come to the conclusion that people are only interested in the illegal parts of the trade, like how fast can I get that safe open, how can I get in without a key, or how can I get my own tools?

Don't get me wrong, I may be bitter, but I still don't show or tell people any more than I have to. But then I don't really need to seeing as how they can order better books than what I have, or can get them out of the library.

I think I've tested the system of law pretty well and it's flunked miserably as far as our trade goes. Therefore I have no plans of trying again.

Retired Optimist  
Charles Osborne  
Virginia

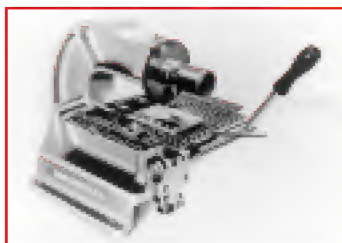




# Security Café

**DROP IN FOR  
TOOLS, TECHNOLOGY  
& EQUIPMENT**

## Numberall Simplified Key Marking



Numberall Stamp & Tool Co. Inc. is featuring a line of specialized key marking equipment. This equipment is ideal for hotel and motel industries, Universities, school districts and housing authorities as well as locksmiths. It is useful when large number of keys must be stamped with identifying numbers and letters.

The equipment ranges from the economical Model 23 Typeholder to the Model 137 motorized bench-marking press. Included is the Model 40B which features a large easy to read dial and a carriage table, which automatically advances after each impression.

## American Lock® Padlocks With 5" Shackles

American Lock Company' is expanding it's product offering to include brass and

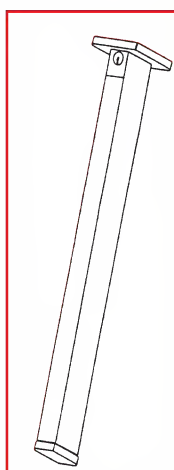


aluminum padlocks with 5" long shackles. The longer shackle length satisfies the physical requirements of locking up food service equipment.

American Lock offers this new longer length shackle on two popular styles of brass and aluminum models. The shackle is 5/16" diameter, precision machined from boron alloy steel. It is case hardened for extra protection against cutting and chrome plated to resist corrosion. The 1 3/4" wide lock body can be ordered in brass or aluminum, in a choice of 5 pin or 6 pin security and with all the standard American Lock keying and service options.

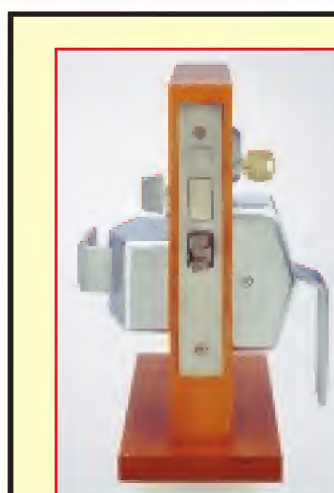
## Detex Heavy Duty F90KR Mullion

The new F90KR heavy duty, keyed removable mullion by Detex is designed for use on



standard and fire rated pairs of doors. The mullion is made of 11 gauge, 2" x 3" steel for strength and durability, is UL and Warnock Hersey listed for three hour rated pairs of doors up to 8' x 8' and can be operated by a standard rim cylinder— available anywhere.

Installation is



## ABH Push Pull Latches

The non-handed Push-Pull Latch and Latch with Mortise Lock from Architectural Builders Hardware can be mounted with the handles up, down or horizontal without field changes providing maximum clearance between the handle and door. Locksmiths can also purchase trim only for a quick 10-minute

interchange from knobs to push-pull for mortise locks from manufacturers such as Arrow, Best, Corbin Russwin, Falcon, Schlage, Yale, Sargent, Marks and PDQ. The Push-Pull Latch is available with 2 3/4", 5" or 7" backset latches; the mortise lock is standard 2 3/4" backset latches. All models are UL listed for fire doors and meet ADA requirements.

simple and quick and no drilling is required. The mullion is available in 8' lengths and is easy to cut to desired length. It can also be removed in seconds, as there is no need to remove screws to move large items through door openings. To replace the unit you simply snap the mullion back into the upright position.

## Threadlockers & Retaining Compound

Threadlocker 222 is low strength, removable with hand tools, and is best for small fasteners, 1/4" and smaller. It's ideal for long engagement length fasteners, set screws, calibration and adjustment screws. Threadlocker 242 is medium strength, general purpose. It is



removable with hand tools and is good for all nut and bolt applications, especially 1/4" or larger fasteners. Threadlocker 290 is formulated especially for small to medium size pre-assembled fasteners. Retaining Compound 609 augments the strength of press-fitted assemblies and slip fits with up to .005" diametrical clearance.

## Major Manufacturing HIT-44 Accessories

Major Manufacturing has introduced a complete line of accessories for the HIT-44

**Continued on page 16**



Continued from page 14

## SECURITY CAFE



44 Drill Master. Available separately or in kit form, included are three different strike and latch marking tools. These tools have features that include blades that can be sharpened or replaced, and the latch marker has adjustments for 1" or 1-1/8" wide faces. All three markers can be adjusted for 7/8" or 1" latch or strike holes. Strike locators with replaceable pints are also available as multi spur and brad point bits.

### SARGENT Introduces Center and Top Latch Exit Device



SARGENT Manufacturing, introduces its new Center and Top Latch Exit Device. Developed to provide ease of access for the public with particular attention to those with physical disabilities, the CTL eliminates the problems typically associated with bottom

rods and floor strikes of traditional vertical rod exit devices.

The CTL utilizes traditional vertical rod latching at the top, and adds a mortise lock to secure the door at the center, providing three security points on double doors and two security points on a single door.

### Adjustable Turning Tools From MBA



MBA has received many phone calls from locksmiths interested in the adjustable turning tools described by Sal Dulcamaro in his article Odds & Ends (The National Locksmith, January 1998). MBA is pleased to announce these tools are once again available and are offered as a set of four. Designed by John Falle, these stainless steel adjustable tension tools are usually sold as part of a larger pick set, also available from MBA.

### Roto Zip® Drill Bit Cuts Out Need For Other Bits

Roto Zip Tool Corporation announces the 3D Zip® Bit that drills, mills, countersinks, and cuts wood, and wood products, in virtually any direction — even around corners. Used with 3/8" and 1/2" drills, this single bit replaces forstner, spade, and twist drill bits.



### Detention Stops From Stanley

Stanley Hardware has announced the addition of two new security door stops to their product line for detention and/or correctional facilities.

The new stops — Model 3001, a vertical style floor stop, and Model 3002, a horizontal style wall stop are both made of fire resistant, black neoprene rubber for long wear, heavy use and for resistance to abuse.



The 3D Zip Bit's patented design is made up of an oversized crown with six cutting edges and a slender shank. These cutting edges allow the 3D Zip Bit to cut forward, backward and even sideways, while preventing the jamming and intense vibration associated with other types of bits.

### New Corbin Russwin Grade 1 Key-in-Lever Cylindrical Lockset

Corbin Russwin introduced the CL3300, its newest Grade 1 Key-in-Lever Cylindrical Lockset.



The CL3300 Series features a patented Lever Release design that allows the lever to disengage when pressure is applied in the locked condition, the latest in vandal resistance. The

new CL3300 Series, which carries a 3 hour UL fire rating, replaces the CL3400 Series Key-in-Lever Lockset.

Other features of the new Grade 1 lockset include a 3 1/2" rose to cover the new hollow metal door cut out, through bolting for solid door attachment, independent lever return springs, and expanded keying options.

### 39 Victory Brake Disk Lock

ABUS Motorcycle Lock Company, a division of A.P. Steele Corporation announces the introduction of the 39 Victory Chrome Brake Lock. Developed by German engineers to resist all types of professional attack, the 39 Victory is specially shaped and triple chrome plated.

The unique patented design and patented ABUS Plus Keyway



## SECURITY CAFE

**SRI**  
SECURITY  
RESOURCES INC.

**SRI and Steve  
Young are working  
together to bring  
you the best in  
locksmith tools  
and supplies.**

[Click here for more information](#)

Continued from page 16



System offers balanced maximum security against Freon® spray, bolt cutters, drilling, picking, hammering and cylinder pulling. The lock body and mushroom pin are crafted from special high strength steel alloy and then core hardened to 65 Rockwell hardness, making the lock harder than the jaws of bolt cutter blades.

### **NEBS, Inc. Introduces New WorkWear Line**

With the introduction of its new WorkWear line, NEBS offers small

businesses the ability to boost their professional images — and possibly their sales — with a diverse line of premium-quality, customizable products including classic poplin shirts, mesh polo shirts, industrial work pants, coveralls, jackets and work coats in addition to a wide selection of hats, T-shirts and sweatshirts.

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# Holding TOUGH

WITH

# TRIMEC



It seems like only a few years ago that clients needing electric strikes had two or three manufacturers available to choose from, and the options varied with each strike. You needed to stock a different strike for each voltage or application, or wait until you were awarded a specific job before ordering the appropriate strike. Times are now starting to change. The shrinking world has been one reason that there are more strikes available today from a

larger field of manufacturers. While there's not really a "one fits all" strike available quite yet, more and more field adjustable features are becoming available.

Trimec is an architectural electric strike manufacturer that has recently introduced its product into the United States. Trimec is built in Australia where it boasted a market share of almost 70 percent! In this article we will be viewing three of the products that they have been manufacturing in America: A nice compact electric strike designed to fit into 4-7/8" ANSI frame prep, a larger, heavier duty electric strike with a 7-7/8" faceplate and an electric lock which surface mounts onto the door frame with a roller strike which mounts on the door.

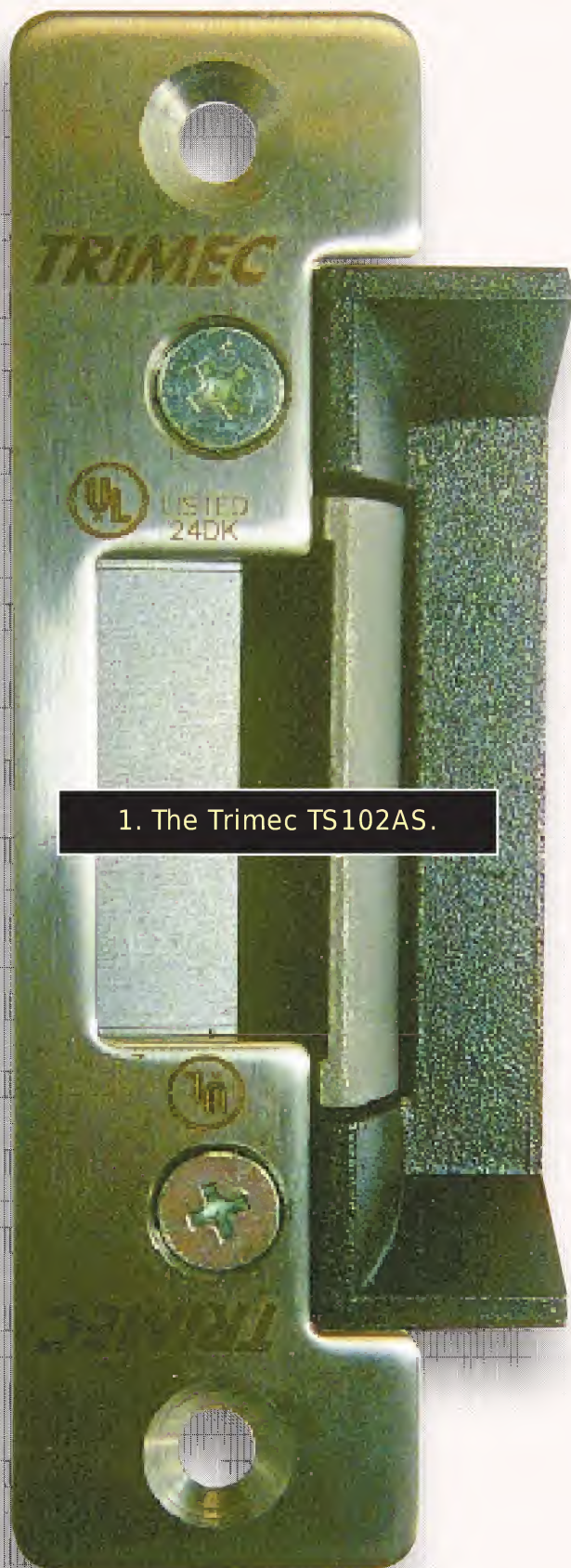
Both strikes are UL 1034 Burglary Resistant and rated at 1500 lbs. They are put through a Static test, followed by the 70 lb. Dynamic test. These are the greatest testing levels that UL has established for electric locking mechanisms. The ES600 electric lock has not been listed for UL1034. All of the products however, have been independently tested to 3000 lbs.

Call it Fail Safe or Fail Secure; Fail Safe or Non-Fail Safe; or Power to Lock or Power to Open, one of the features that all three of these Trimec products have in common is that they all can be field converted from, as they clearly refer to it, from "Power to Lock" to "Power to Open." While most technicians will find Power to Open the most common application for the electric strikes, there are a number of installations where Power to Lock might be required, especially if the door is expected to be automatically left unlocked longer than it is locked.

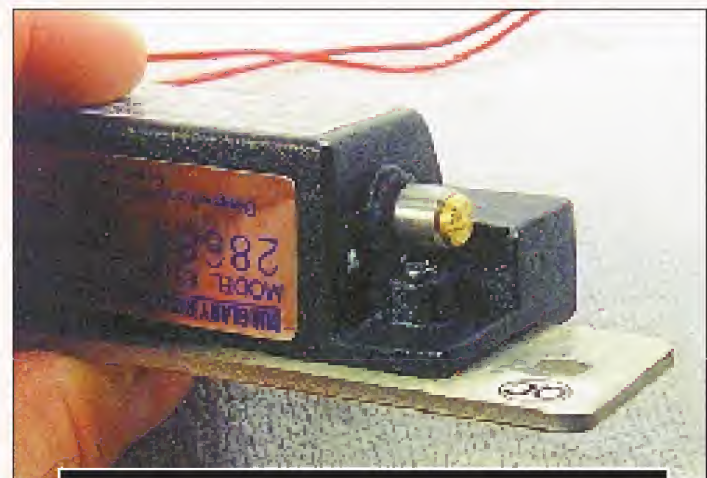
12 or 24 Volt DC requirements must be specified for the electric strikes. The electric lock can be field converted from 24 volts DC to 12 volts DC.

### ES100 Series - TS102AS

The TS102AS is designed to fit into a 4-7/8" ANSI prep. (See photograph 1.) The strike is only 1-1/8" deep, making it a breeze to fit in those 2" (or less) frames with sidelight that the architects have been brewing up recently. The face of the frame only needs to be cut back 5/8". It has a maximum strike cavity of 1/2", making it an ideal mate for locksets having latches with a 1/2" projection. It can accept a 5/8" throw assuming there is no more than a 1/8" door gap.

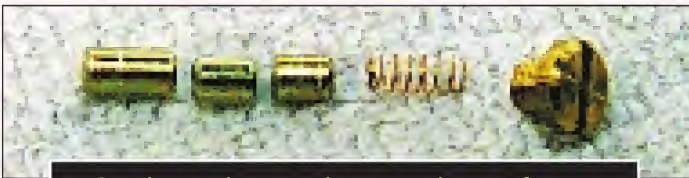


1. The Trimec TS102AS.



2. Remove the brass colored screw from the back of the strike and remove the "pin tumbler stack" and spring.





3. The "pin stack" consists of two short and one long tumbler. A spring keeps pressure on the pin stack while the screw caps the top of the chamber.



4. The solenoid moves the pin stack to the strike keeper's shearline. Placing the longest tumbler in first or last determines whether the strike will be fail safe or fail secure.

**T**his unit can be changed from fail secure to fail safe easily by removing the brass colored screw on the back of the cast aluminum case (see photograph 2) and carefully emptying the spring and three pin tumblers. (See photograph 3.)

For fail safe operation, insert the longest tumbler first, followed by the two short tumblers, and finally the spring. For fail secure operation, insert the two short tumblers first, then the long tumbler, and the spring. (See Photograph 4.) When the stack is inserted, replace the screw and the change is complete.

The solenoid is rated to 1,000,000 cycles. The leads are color coded and are indicative of the strike's DC voltage. Red leads indicate 12 VDC and an amperage requirement of 0.25 Amp. Blue leads indicate 24 VDC and an amperage requirement of 0.187 Amp.



5. The TS314 is a more hefty strike than the TS102AS.

The TS102AS has a manufacturer's list price of \$116.00 which includes a three year warranty.

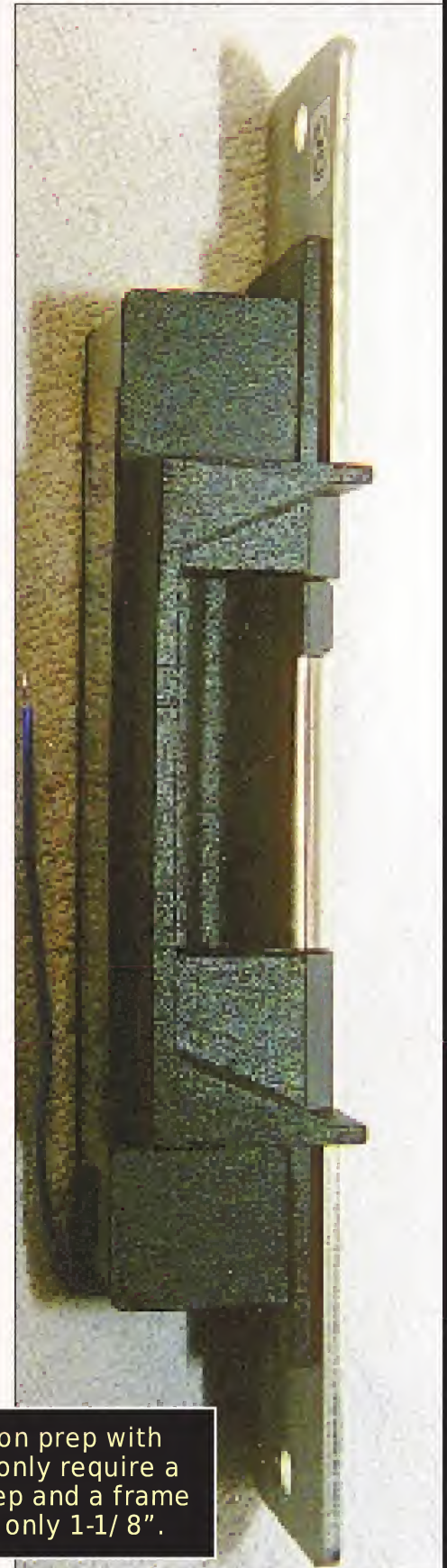
### ES300 Series - TS314

The TS314 is a beefier strike with a price tag of \$268.00 and a five year warranty. (See photograph 5.) It has a strike cavity with a 5/8" depth, allowing it to be mated with virtually all cylindrical locksets, including ANSI Grade 1 locksets with 5/8" latches and mortise locksets (i.e. Adams Rite deadlatches) designed for aluminum style doors. It can accept a 3.4" throw assuming there is no more than a 1/8" door gap. (See photograph 6.)

While other strike plates are available, the TS314 strike plate is 7-7/8" long. The main strike body is 5-7/8" long, but the installation prep with a faceplate would only require a pocket 1-1/4" deep and a face cutback of 1-1/8". The faceplate is horizontally adjustable to compensate for door/ frame warping or variations in latch placement.

The solenoid in this strike is also rated to 1,000,000 cycles. The leads are also color coded and are indicative of the strike's DC voltage. Red leads indicate 12 VDC and an amperage requirement of 0.175 Amp. Blue leads indicate 24 VDC and an amperage requirement of 0.88 Amp.

It's a little more difficult to change the fail safe/ fail secure mode on this strike, but, since it only needs to be done once at most, it's still an easy change. The



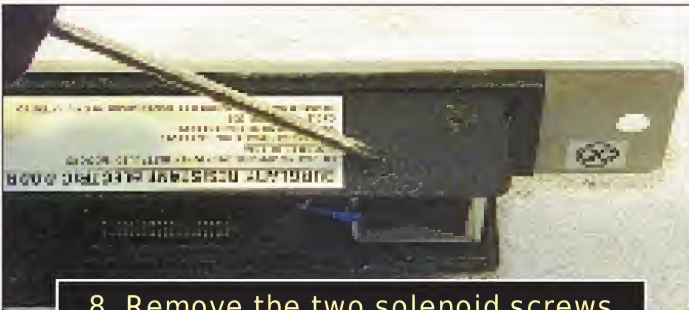
6. The installation prep with faceplate would only require a pocket 1-1/4" deep and a frame face cutback of only 1-1/8".



Continued from page 22



7. Gently pry off the backplate with a flathead screwdriver.



8. Remove the two solenoid screws on the side of the strike case.

stainless steel backplate pries off with a flat blade screwdriver. (See photograph 7.) The two solenoid screws must be removed from the side of the case (see photograph 8) and the solenoid gently lifted out of place. (See photograph 9.)

The "pin tumbler" principle that was found on the other strike is done here as well. (See photograph 10.) However, there are two differences:

1. There is no "top" spring that goes into the pin stack. The spring is located out of the chamber and keeps the pin stack from dropping into the case during operation.
2. The longest pin is dropped into the stack first for fail secure operation and last for fail safe operation.

After the pin stack is replaced, attach the solenoid making sure that the solenoid plunger can freely rise up and down in the solenoid and pin chamber. Feed the solenoid wires through the back cover and snap it into place.

It should never be necessary to remove the face plate, however, the sample that we were provided had two different lengths of faceplate screws, one 1/2" long, the other 3/8" long. The shorter 1/2" screw should be placed behind the solenoid. If the longer screw is placed behind the solenoid, the screw will damage the solenoid when the faceplate is installed.

This strike also comes in an ES3000 Series, priced at \$347.00. The ES3000 has internal monitoring switches that can trigger a warning device, usually a lamp or alarm at a monitoring station, that can indicate if the door lock is latched or the strike is in the unlocked position. (To take full use of this feature, many security specialists recommended that an independent door position switch also be wired in series or series-parallel with these switches to indicate if the door is physically open. Latch position switches alone can easily be defeated by tape, paper, or gum with the door open.)

## ES600 - ES6SL-M

The builder's hardware market in this country don't see too many purely electrical locks with set aside magnetic locks that are always fail safe. The ES6SL-M is electrically monitored for swinging doors. (See photograph 11.) (There is a version of the ES600 for sliding doors.) It is not an electric strike however, there is an optional manual key override available. Here, the choice between fail safe and fail secure is a critical decision. If the fail secure option is chosen, and the power goes out, bear in mind that even though this lock is not UL rated, it has been tested with a holding force of 3000 lbs. and cycle tested 2,000,000 times! The ES600 can also open freely under 1200 lbs. of pre-load pressure. In the fail safe operation mode, this lock could compete virtually anywhere that a magnetic lock might be found.



9. Gently remove the solenoid from the lock case.



10. The fail safe/ fail secure pin stack is located in the center of the case underneath the location where the solenoid is located. Note that if the long faceplate screw is mounted on the side of the solenoid, it will probably cause damage to the solenoid.



**Continued from page 24**

**T**he lock's overall dimensions are 7-7/8" wide, 2-1/8" high and 1-3/4" deep. The swinging door version is mounted to the top or side of the door frame. The roller strike 1-15/16" X 1-3/16" mounts on the face of the door with through bolts for a strong installation. Except for pulling wire, the installation seems easier than mounting a rim deadbolt. A metal template is provided to assist in the marking of mounting holes.

The lock we tested was received in fail safe (power to lock) mode at 12 VDC. If we needed to field change this lock for either voltage or power to unlock, we could do so. To do either, we would need to remove the four screws which hold the outer cover in place. Then the stainless steel inner cover must be snapped off. (See photograph 12.)

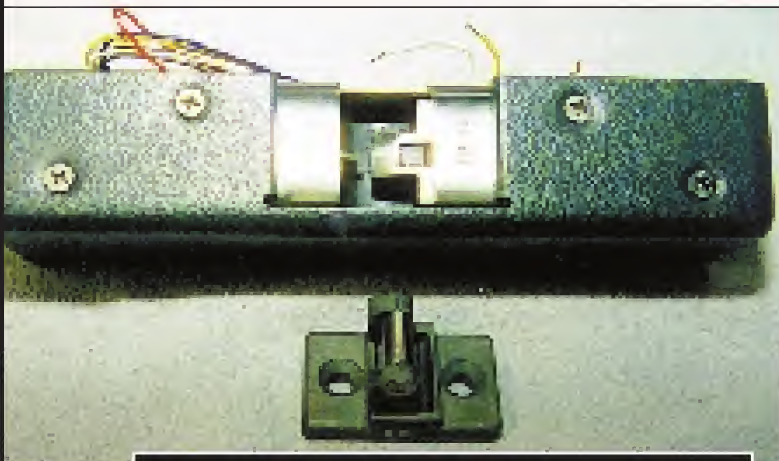
To change voltage from 12 VDC to 24 VDC, simply remove the jumper link from pins 2 and 3 and place it on pins 1 and 2 on the power board. (See photograph 13.) The 12 VDC amperage has an inrush of 0.75 amps until the solenoid seats, then the amperage drops to 0.375 amps. At 24 VDC, inrush amperage is 0.375 amps then drops to 0.185 amps when the solenoid seats. (As a side note, if you are responsible for specifying wire gauge, specify it according to inrush amperage. If the solenoid does not seat properly, the electrical demand may continuously be that of the inrush value.)

Changing the unit from fail safe to fail secure (power to lock to power to unlock) is a bit more complicated than it is for the strikes. Because the instructions are written on the side of the lock, it is however, fairly easy to do. It requires moving the pin and toggles on the left side of the lock from position A to position B. The mounting screw for the pin is on the underside of the lock. It is then necessary to remove the four screws on the right side of the lock that are in position A. This will loosen the solenoid. Move the solenoid so that the mounting holes line up to position B and reinsert the screws. (See photograph 14.)

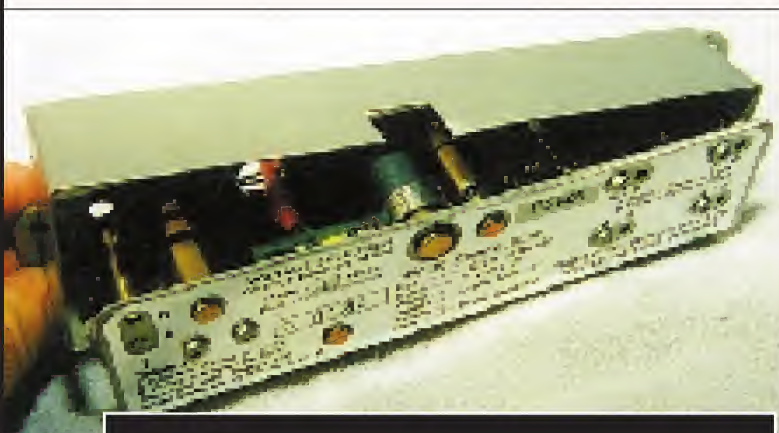
Check the lock to make sure that the solenoid is seated properly. Snap your inner cover in place. Wait to install the outer cover until you are installing the lock and strike to the frame and door.

This lock carries a 3 year warranty and a list price of \$496.00. It shouldn't be long before you see these products at a wholesaler near you.

All the Trimec electric strikes are well constructed and designed. If you need more information on Trimec products contact: Trimec, 132 W. Maple Street, Grafton, WI 53024, Phone (414) 375-8330. **TNL**



11. The ES6SL-M is designed to be surface mounted on the frame with a roller strike to be mounted on the door.



12. The ES6SL-M with the main cover removed and snapping off the inner cover.



13. The center shows the power board. Moving the jumper link to positions 1 & 2 from 2 & 3 changes the voltage from 12 VDC to 24 VDC. The A/B pin and the toggles must be changed to convert the lock from fail safe to fail secure.



14. The solenoid must also be repositioned when changing from fail safe to fail secure.



# Directional Cylinders

How they work and how to make them

by Billy B. Edwards Jr., CML

**T**here are customers who will want a special function that will allow them to give certain employees a key that can only lock a particular door while they keep a key that will lock or unlock the same door. What they want is called a directional cylinder.

There are quite a few directional cylinders available in the marketplace, but most of them are high security. This is not because they have to be high security, but because the standard everyday use for them is in the prison environment where high security is the norm. In a high security lock it is known as the "Brink" function and must be ordered as clockwise (CW) or counter-clockwise (CCW).

The directional cylinder is usually found in a minimum security prison and the inmate actually has a key so that he can lock his own cell door to secure his property left inside. There is another market for this cylinder and as mentioned above, sometimes your customer will figure out that he wants it without being aware that it is available.

The operation is simple. The cylinder can be operated by two keys with different bittings with only one of the keys turning the plug in one direction. That key which only turns one direction is said to be unidirectional and the direction is either CW or CCW. The operation is the result of making a second shear line possible within the cylinder.

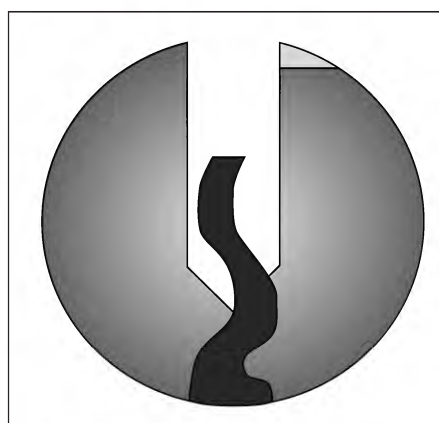
Illustration 1, shows how this second shear line is achieved for this CCW cylinder. A part of the cylinder plug on one side of a single pin chamber is removed. The important part of making one of these cylinders is the amount of

the plug that needs to be removed. The way to figure it out is to actually use some of that plane geometry from high school. The part that is removed forms a triangle and the critical dimension is the length of the hypotenuse of that triangle. For those of you that don't

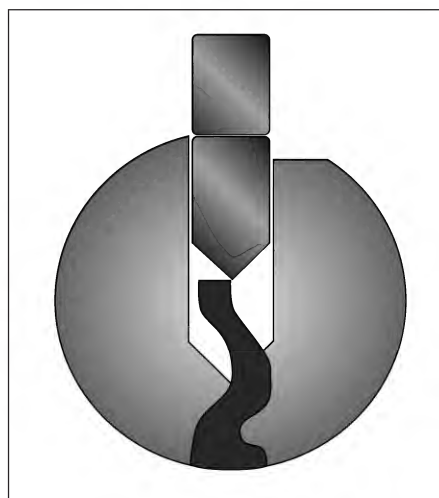
want to go look it up, the hypotenuse is the longest side of the triangle. That side can not be longer than the pin is wide if you want the cylinder to operate correctly. Instead of doing the math, I'll just tell you that the notch should usually not be deeper than around .045" or shallower than around .025".

This is how it works. There are two keys with different bittings in the cut position that corresponds with the notch position. The omnidirectional key is the higher depth of cut.

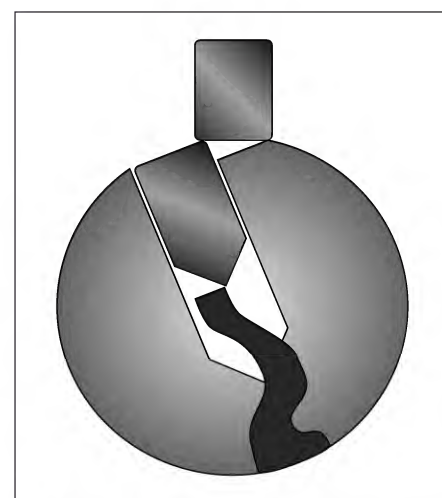
In Illustration 2, you can see the relationship of the pins with the omnidirectional key inserted. Because the hypotenuse of our triangle is less than the thickness of the pin, you can see what happens when the plug is turned a complete revolution. (See Illustration 3.) It's as if the triangle of metal removed from the plug was still there because the pin bridges the gap.



**1. A part of the cylinder plug on one side of a single pin chamber is removed.**

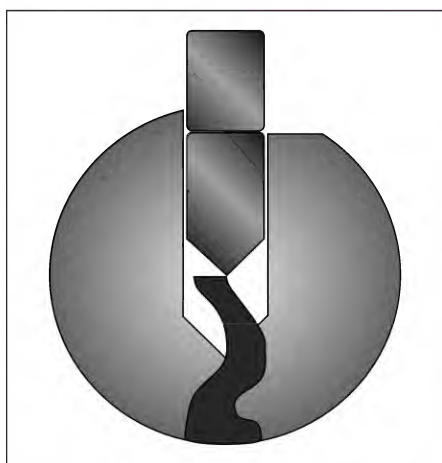


**2. The relationship of the pins with the omnidirectional key inserted.**



**3. When the plug is turned the pin bridges the gap.**

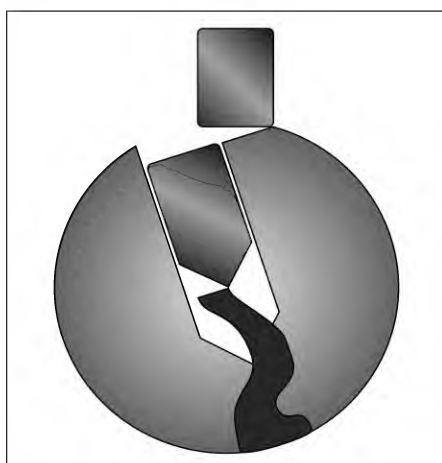




**4. This key cannot be turned in a CW direction because the pin can't get above the wall of the pin chamber.**

It's a different story when the other key is inserted in the cylinder. In Illustration 4, you can see the position of the pins and note that this key cannot be turned in a CW direction because the pin can't get above the wall of the pin chamber. It can move over the new shear line when turned CCW and even turned a full revolution if required for lock operation.

The important thing to remember when looking at the plug for a directional cylinder is that the direction can be related to the side wall of the pin chamber which doesn't have the notch.



**5. The position of the top pin as the plug is returned to the key withdrawal position.**

In Illustration 5, you can see the position of the top pin as the plug is returned to the key withdrawal position.

When the pin first starts to go past the removed area of the plug it is in a position that would allow it to bridge the gap if the bottom pin were at the upper shear line.

Because the pin isn't there, the top pin starts to level off and seat on top of the bottom pin at the lower shear line. (See Illustration 6.)

It is probably a good idea not to use spool or mushroom pins in the modified chamber since they have a slightly different pin geometry which may cause them to operate roughly or in some cases allow the intended unidirectional key to become omnidirectional.

The cylinder in the figures is roughly to scale and the increment used is .015". The notch is drawn to

be three increments deep. Therefore the omnidirectional key has a depth of 3 while the unidirectional key is cut to a number 6 depth. These cylinders may be master keyed as long as the altered chamber is not progressed, but they don't have to be master keyed to operate.

**R**ecently a locksmith on the Clearstar Network mentioned a customer who wanted a directional cylinder with two different unidirectional keys. His particular situation required the person who closed the store at night to only be able to lock the door and the person



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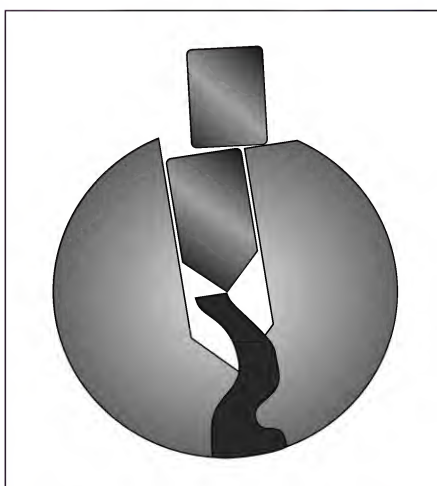




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**6. Because the pin isn't there, the top pin starts to level off and seat on top of the bottom pin at the lower shear line.**



**7. A modified plug allowing both omnidirectional and unidirectional key operation.**

who opened the store in the morning to only be able to unlock the door. Using some insight into cylinder function and applying the principles described here, he fabricated a cylinder which filled the requirement. The plug looked something like the one in illustration 7. As you can see, it has two notches in it. Each notch is made in a different direction. Cutting the keys for this example could get confusing. As you can see the notches are in chambers 5 and 6. The first thing to do is pick the combination of the omnidirectional key. Once again I am using a notch depth of three .015" increments. The omnidirectional key cut should not be a zero, one, two or three depth because that can also affect operation. When the plug is upside down the bottom pin can move. Since only gravity will be causing it to seat again when upright, a short pin may not seat as well because it weighs less than a long one. Therefore it could be too high for the top pin to get on top of it when the unidirectional key is used.

For this cylinder I chose a combination of 61246 for the omnidirectional key. The notch in the fifth chamber indicates that it controls CCW rotation and the forth chamber controls CW rotation. Depending on the hand of the door, the fifth chamber key could be the lock or the unlock key. My door is RHR and it has an AR1850. That means that CCW will lock it from outside and CW will unlock it from outside. Therefore, the combination of the lock key will be 61249. Note that for this to work correctly the forth chamber must remain omnidirectional. The opposite arrangement is required for the unlock key, its combination will be 61276.

So for this one cylinder we have three different keys:

61246 a omnidirectional key that will lock or unlock the door.

61249 a unidirectional key which will only lock the door.

61276 a unidirectional key which will only unlock the door.

#### • How to make them •

Since they aren't readily available from the distributor shelf, you will most likely have to make the plug configurations yourself. Some locksmiths have mentioned using a dremel tool or a hand grinder, but I can't seem to be precise enough with that method. Here's something you can do if you have a drill press. First put a plug holder in your press vise then put the plug in the plug holder. The problem now is that the plug will still turn, put a key in it with the unidirectional cut in the right place. Now wedge the bow of the key so that it won't let the plug turn and put a correct bottom pin in the chamber. Put an end mill in the chuck of the drill press and set the press so the end mill is at the top of the bottom pin. Now just slide the vice to the side and let the mill do its work.

If that proves unacceptable, you might order some Schlage cylinders with ward rings. They won't be as versatile since they won't allow 360 rotation, but work well for similar operation requirements on some exit devices.

**D**irectional cylinders have been around for a while, however their use has been limited to a few exceptional circumstances. A resurgence of interest in directional cylinders recently, has offered wider spread applications allowing you to offer a customer greater lock flexibility with a minor plug alteration. **TRL**



# Automotive Updates



by Tom Gillespie

utility vehicle segment of the market has grown dramatically in recent years, brands like GMC and Lexus are introducing new luxury sport-utilities while Buick will continue to only manufacture cars.

## Chevrolet

The Impala nameplate will be revived on a stretched version of the 1999 Lumina platform.

## Chrysler

A new 1999 LHS sedan will be joined by a new 300M sedan. The 300M is a shorter, sportier version that grew from the demise of the Eagle Vision, sister to the Dodge Intrepid and Chrysler Concorde models.

## Daewoo

Having canceled its American debut at the Greater Los Angeles Auto Show, Daewoo also dropped plans to show at the Chicago and Philadelphia shows. Daewoo had planned an aggressive assault on the U.S. If and when they do make an appearance, Daewoo's most likely approach to sales will be factory-direct. Daewoo has had little impact in the U.S. with the exception of the '80's built Pontiac LaMans.

## Dodge

Chrysler corporation has recalled 25,000 Dodge Durangos because of fires in the engine compartments. The first indication of a problem occurs when the motor quits and the ignition key won't work. A wiring harness is suspected of coming loose and causing the fires. Although only a few fires have been reported, the recall was issued to ensure customer safety.

## Ford

The next U.S. Ford Contour and European Mondeo will be completely redesigned using Ford's 'New Edge' design. The redesign is not expected to hit our shores until next year as the 2000 model. Ford will be releasing a four-door version of the '99 Ranger pickup and is also considering development of a hybrid car/truck along the lines of the Subaru Outback.

## Honda

A new, larger minivan will be out in October, built in Ontario, Canada. The Accord-related vehicle may also spawn an Accord-based sport-utility that could replace the current (imported) CRV. Honda has three new convertibles

If you do automotive work, you need to be aware of what's happening in the auto industry. By keeping up with model changes, recalls, redesigns and new releases, you'll be able to stay aware of the ever-changing automotive scene.

## BMW

An all new sport-utility is in the works. It will be completely separate from the lineup of BMW's subsidiary, Land Rover. The vehicle will be built in BMW's Spartanburg, S.C. factory. A redesigned 3-series sedan will go on sale in August in the U.S.

## Buick

In 1997, Buick was the only brand among the top ten sellers who didn't offer a truck. As the truck and sport





## Continued from page 32

scheduled. The SSM roadster in '98, the Civic Cabrio in '99 and an Accord-based model in 2000.

## Hyundai

You may see fewer and fewer Hyundai dealers soon because Hyundai Motor Finance Corporation has slashed the number of U.S. outlets it serves from 220 to just 75, located in 20 states.

Infiniti - The G20 will return to the lineup in August, built in Japan off of the Nissan Primera platform. Infiniti sales in 1997 climbed an impressive 17.1 percent with the QX4 selling far ahead of its projected goals. The Q45 is due for redesign this fall and the I30 will further distance itself from its near-identical cousin, the Nissan Maxima. Also, look for a new model to fill the gap left by the discontinued J30.

## Jeep

The next-generation 1999 Grand Cherokee is completely new and due at dealers later this summer.

## Kia

Korea's Kia Motor Corporation has opened 34 dealerships in New York, Connecticut and Ohio in the past month. Kia currently offers the Sephia sedan, Sportage SUV and a small pickup. More models, including a minivan are planned for next model year. Like other Korean auto manufacturers, Kia has had tough financial times recently. Kia started out strong on the West coast with its own dealerships in 1994, but has had trouble making progress in the Midwest and East coast. Kia made the Ford Festiva and Ford Aspire before entering the U.S. market with its own dealerships.

## Lexus

The RX300 is a car-based sport-utility that doesn't fit any existing category. It may turn out to be as different of a vehicle as Chrysler's 1984 release of a part cargo van, part station wagon- the minivan. The RX300 is sold in Japan as the Toyota Harrier.

## Lincoln Ford Motor Company

Will cease production of the Lincoln Mark VIII in June. It's not totally unexpected, because the luxury coupe was based on the same platform as the discontinued Ford Thunderbird. Only 16,023 Mark VIII's were sold in 1997. The assembly plant that produced the car is getting ready for production of the new 1999 Lincoln LS6 and LS8 luxury/ sport sedans. Lincoln Mercury is relocating its headquarters from Detroit to Irvine, California later this year.

## Mercedes

Strong sales of the M class sport-utility vehicle has Mercedes planning to boost capacity of the SUV by 20 percent, or 15,000 vehicles a year. The Alabama-built truck may be joined in the future by a Mercedes minivan adopting the layout of the still-new A-class.

## Mercury

In mid-May, 1998 we'll see an all new 1999 Cougar coupe, but there is no plan for a look-alike version for the Ford Division. Seventy-two percent of the new car is common to the Mideo/ Contour/ Mystique family.

## Pontiac

All new '99 Grand Am due this spring or summer. It will share its platform with the new Oldsmobile Alero which replaces the Achieva in the lineup.

## Rolls Royce

Interested parties in the sale of Rolls-Royce are reported to be Volkswagen, BMW and Toyota.

## Toyota

The new Land Cruiser 100 is now on sale in Japan and the U.S. version made its first appearance at the Chicago Auto Show in February. More American-made than ever before, over sixty percent of the 1.23 million

Toyota and Lexus vehicles sold last year were built in North America. A total of 838,069 Toyota vehicles were built at their plants in Kentucky, California and Canada. A new Camry derived coupe, the Solara, will hit this summer as a 1999 model. Features include side-impact airbags and keyless entry. Also, 300,000 Toyota Camry's are being recalled for a solenoid defect that allows removal of the ignition key even when the shift lever is not in "park". The danger is that a motorist can remove the key-thinking the vehicle is in "park"-and it can roll away.

## Volkswagen

The New Beetle is a water-cooled, front-engine, front-wheel drive version of the hottest car of the '60s. Based on the Golf, it sells for around \$16,000+ and utilizes side-impact airbags.

## Volvo

Volvo will bring its two smallest cars, the S40 sedan and S40 station wagon, to the U.S. market in late 1999 as 2000 models. Produced in Europe as a joint venture with Mitsubishi, the cars will be aimed at the buyers of Ford Taurus, Honda Accord and Toyota Camry.

Following are some of the vehicles you will see the most, because they are the best sellers.

## 1997's Top 10 Sellers

1. Ford F-Series pickup
2. Chevrolet C/ K pickup
3. Toyota Camry
4. Honda Accord
5. Ford Explorer
6. Ford Taurus
7. Dodge Ram pickup
8. Honda Civic
9. Chevrolet Cavalier
10. Ford Ranger

TRM





# The 1998 Dodge

# INTREPID

by  
Michael  
Hyde



The Dodge Intrepid is a popular mid-size car with the rental car companies and I'm sure you will be seeing many of them on the road.

## VEHICLE OPENING



This car uses vertical linkage rods which are unshielded.



On this car we lowered a horizontal slide linkage tool into the drivers door with a couple of good wedges.







You should be able to easily make contact with the inside locking button linkage rod and raise it to unlock.

**4**

## DOOR LOCK



**5**

The door lock cylinders on this car are mounted into the outside door handles.



**6**

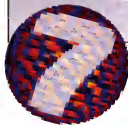
The inside door panel needs to be removed to service the door lock and is held in place by metal screws and plastic clips.



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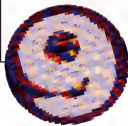
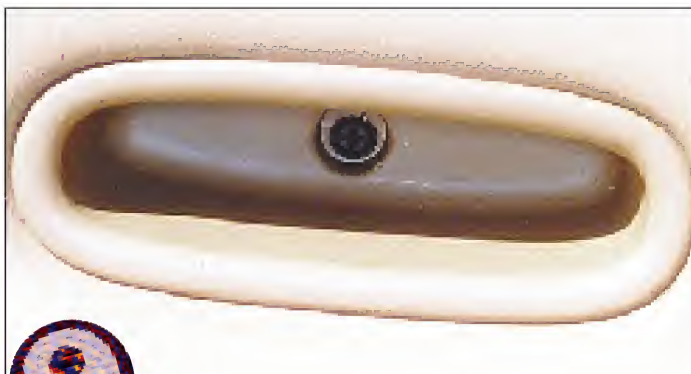




Remove the metal screw located in the door release handle trim.



Remove the two metal screws on the upper forward section of the panel.



Remove the metal screw located in the door pull cavity.



There are three metal screws located on the bottom of the panel that must be removed.



Remove the metal screws that hold on the small speaker that sits on the top forward corner of the panel. Unsnap the wire connector to the speaker.



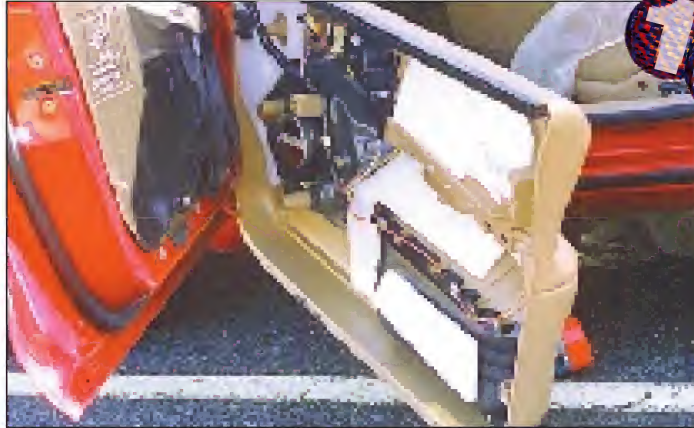
Down lower on the door is a larger speaker that is covered by a speaker grille.





**13**

Gently remove the speaker grill and underneath there are three metal screws that must be removed also.



**14**

The door panel can now be removed. Make sure you remember to disconnect the electrical wire connectors.



**15**

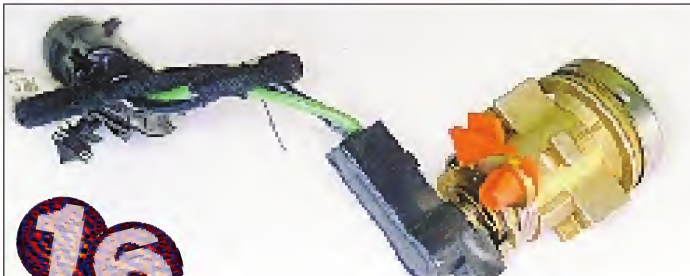
The door handle is held in place by two bolts, remove them so you can tilt up the handle. A wire clip holds in the door lock cylinder. Remove the wire clip and slide out the lock.



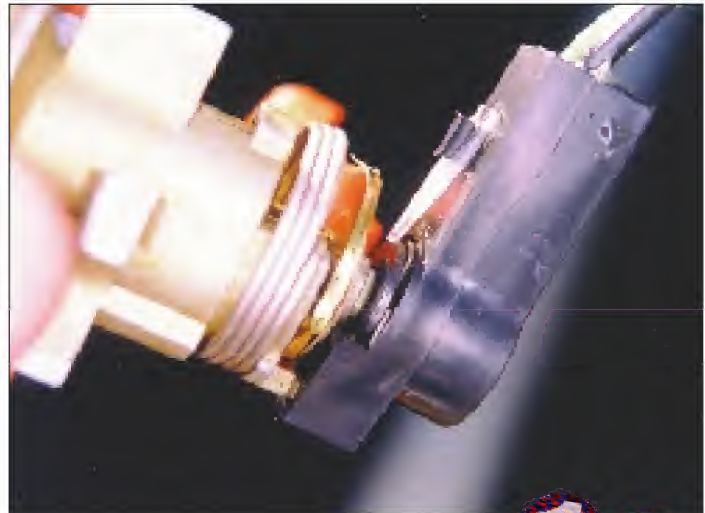
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**16** Caution should be taken when removing the door lock cylinder. This model has a very fragile alarm switch. The lock cylinder and the alarm switch should be removed as one unit and disassembled carefully.



A closer look at the alarm switch as it is mounted to the lock cylinder.

**17**



**18** A very small wire clip is what actually holds the alarm switch to the lock cylinder. Pulling the switch off without moving the clip aside will break the thin plastic that holds it in place. The switch must be replaced if broken.

**19**

The lock cylinder with the alarm switch and tailpiece removed. The face cap is reusable.



The door lock cylinder contains 7 tumblers in positions 2 through 8.

**20**



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## IGNITION LOCK



To remove the ignition cylinder, first remove the 2 Torx screws on the underside of the column shroud.

**21**



The Torx screws are T15's.

**22**



Unsnap and remove the top portion of the plastic shroud.

**23**



To remove the lower shroud you must first remove the tilt column lever. A Torx #30 holds on the lever screw.

**24**

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**25** Once the bottom shroud is removed you can service the ignition cylinder. There is a small trim ring that surrounds the cylinder.



**26** This car uses an active retainer and a working key is needed to remove without damage. If you do not have a working key and need to remove the cylinder, first remove the trim piece. Place a large set of vise-grips on the front section of the cylinder face and rock it back and forth until you force the plug to the "ON" position to depress the retainer. The lock cylinder will be damaged and must be replaced. Do not re-use the damaged cylinder. Great care should be taken on this procedure as to not do other damage to the steering column. This method is done at your own risk.



**27** The ignition lock cylinder removed from the car.

**28**

To re-code the lock cylinder insert a working key and depress the stop pin to allow the plug to travel farther than it normally would.

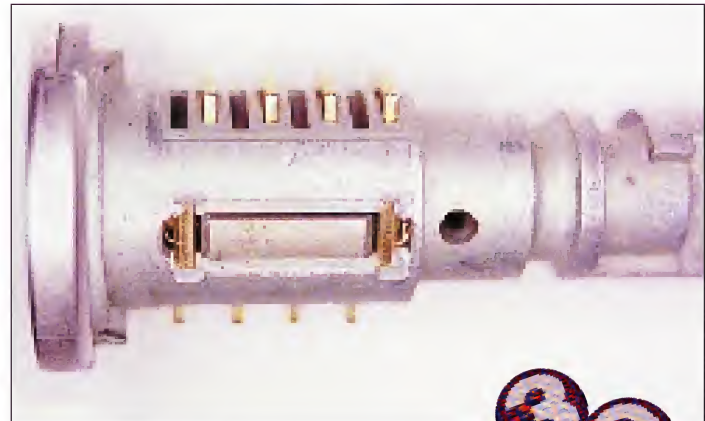
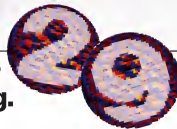




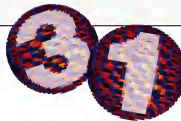
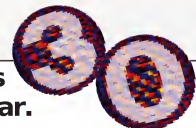
Continued from page 42



Slide the plug out of the cylinder housing.



The ignition lock cylinder contains all 8 tumblers and uses a side-bar.



The cylinder plug uses a small actuator that must not be lost.



If the plug actuator is not in the plug when you re-assemble it, the anti-theft device located in the rear of the plug will not properly engage the security components in the steering column. The car will not start if there is no contact.



The new types of ignition tumblers are pictured. Strattec part numbers are #1 depth-322691, #2-322692, #3-322693, #4-322694, Springs: 46970.

## TRUNK LOCK



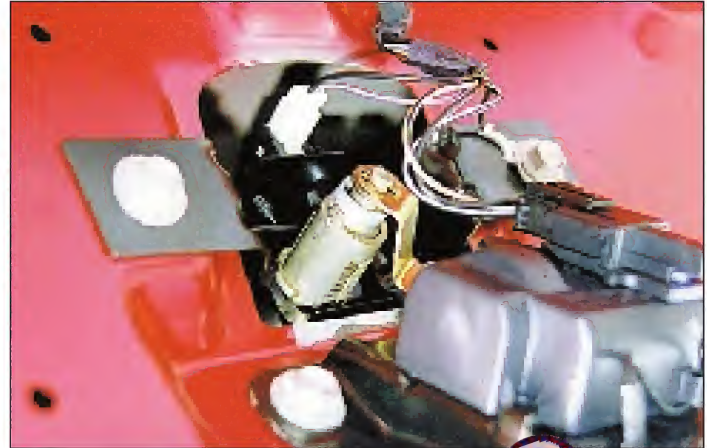
The trunk lock cylinder has a small face when viewed from the outside.







To service the trunk lock cylinder, you must remove the cloth-like liner on the inside trunk lid. The liner uses small plastic push-in style fasteners.



To remove the lock, first remove the two 10mm bolts that hold the lock cylinder bracket. Next, remove the plastic tailpiece linkage connector. That's right, they are now using plastic linkage rods.



The cylinder can now be removed from the bracket by removing the horseshoe style clip.

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The trunk lock cylinder.

38



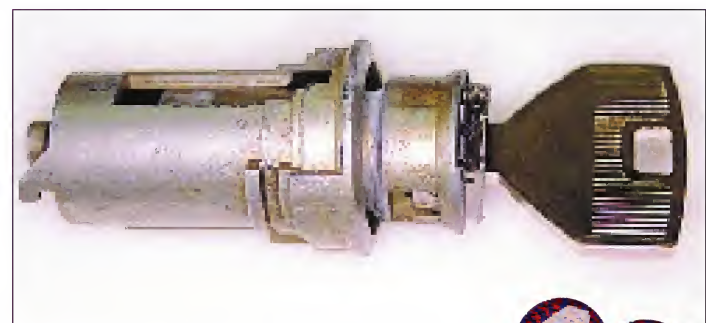
39

The face cap for the trunk lock cylinder is staked on. Use a small flat blade screwdriver to gently un-stake the cap.



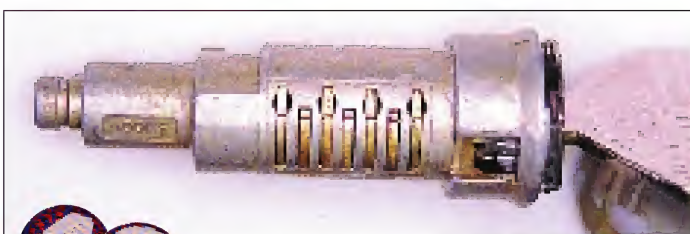
40

The face cap can be reused.



41

The trunk lock cylinder plug is warded and requires a working key to be removed. There is no side bar in this lock so it can be picked also.



42

The trunk lock cylinder contains 7 tumblers in positions 2 through 8.

43

The trunk lock disassembled.





## GLOVEBOX LOCK



44

A view of the glove box lock.



45

To service the glove box lock, remove the 6 phillips-head screws and gently separate the inner and outer sections of the door.



46

Remove the screws that hold the handle/lock assembly in place and remove.



47

A view of the assembly.

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**48**

Either insert a working key or pick to the lock position and depress the "Stop" tumbler to allow the plug to rotate further for removal. The glove box lock plug contains three tumblers in positions 5, 6 & 7 from the bow.

#### MAKING FIRST KEY

##### Method #1

Check owners manual for codes, written in by the dealer.

##### Method #2

Use a tool called an 'EEZ-Reader' to determine the cuts in the door for positions 2 through 8 from the door. You will then only need to progression the first cut in the ignition

##### Method #3

Use Try-Out Keys in the door or trunk to determine cuts 2 through 8. You will then only need to progression the first cut in the ignition.

##### Method #4

You must remove a door or trunk cylinder and decode it. Once you have those seven cuts, in positions 2 through 8, you will then only need to progression the first cut in the ignition.

**Code Series -** M001-M2618

**Key Blanks:** Curtis - Y157, Ilco - Y157, Y159, Silca - CY22, CY24, Jet - Y157

**HPC 1200CM:** #CX102

**Framon:** Lay tip stop clip flat against left side of vise, then tip stop key against clip.

**Framon Starting Cut:** .310

**Spacings:** 1-.941, 2-.849, 3-.757, 4-.665, 5-.573, 6-.481, 7-.389, 8-.297

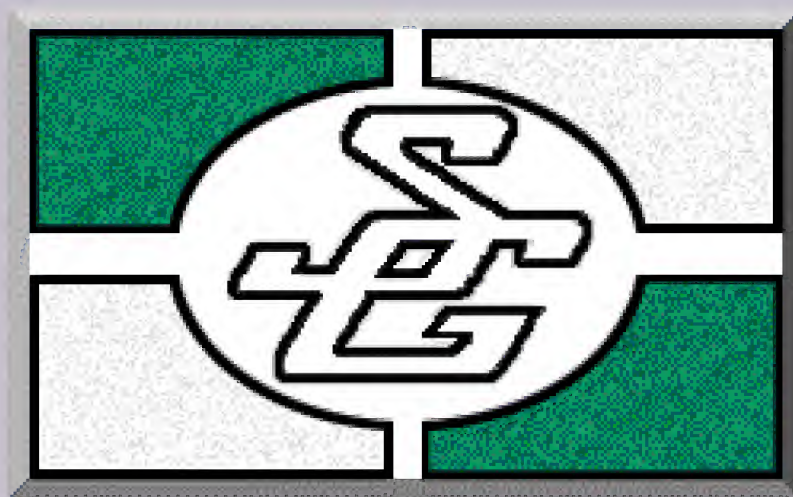
**Depths:** 1=.340, 2=.315, 3=.290, 4=.265

**Gauged:** Tip

**Cut to Cut Spacing:** .092

**Cut:** Bow to Tip

**M.A.C.S.:** 2



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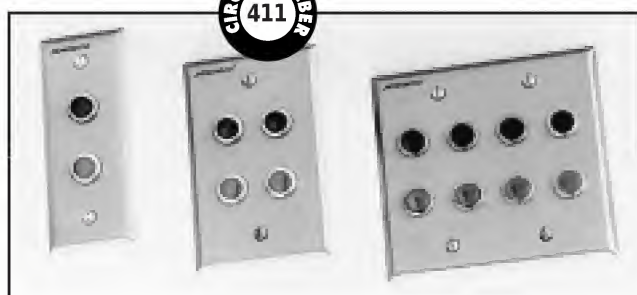


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ISC East - August 1998

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## Securiton Introduces New Light Monitoring Panels



Securiton Magnalock Corporation introduces the ZLP family of Zone Light Panels. The ZLP is used for signaling door status position, Magnalock® lock monitoring status, delayed exit status or alarm conditions.

Attractively mounted on a stainless steel plate, the ZLP comes with long-lasting Red and Green LEDs (Light Emitting Diodes) indicators. Both standard and tamper proof screws are included.

## Locknetics PRO-Line Offers Sophisticated Features

PRO5100 cylindrical and PRO5500 mortise-style, microprocessor-controlled electro-



mechanical PRO-Line locks from Locknetics Security Engineering feature easy programming of 20 individual user codes. Users can be added or deleted in seconds right at the lock. The capability to store 150 individual user codes is optional. The stand-alone design requires no additional wiring and is easily installed in cylindrical or mortise lock preps with only

minor modifications.

## STI Multi-Purpose Push-Button Units



In a major expansion of its well known Stopper® Line, Safety Technology International, Inc. has introduced a full line of multi-purpose, push-button units that cover a wide range of applications.

The customer can select the type of switch/button activation desired-including push & latch, push & release, key & push or almost anything else the customer may specify. Each STI Stopper Station unit is available in the customer's choice of color for the button/key portion of the unit as well as the super tough faceplate that is molded of polycarbonate.

## DoorKing Expands System Capabilities

DoorKing Inc. has expanded the capabilities of its popular "PC Programmable" series of telephone entry systems allowing these systems

to store more resident names and offer control via up to eight entry points, all from a single system.

DoorKing's model 1815 and 1817 PC programmable telephone entry systems now offer expanded



memory capacity allowing users to store up to 3000 resident names and telephone numbers, and up to 8000 card or transmitter codes. The transaction memory in these units has also been expanded and will now store up to 8000 events in the history buffer.

## Full Featured and Low Cost Fire Control

Optex's Genesys 824Fire Package establishes new standards for small to medium sized fire/burglary panels. Advanced features allow the 824 Fire Package to meet a wider range of applications than ever before possible





on a low cost fire panel. The Genesys 824 Fire Package accepts 2 wire smoke detectors, has eight zones (expandable to 24), two partitions and a two amp bell circuit (expandable to five amps, 12 or 24 V dc to drive additional horns, strobes or bells.)

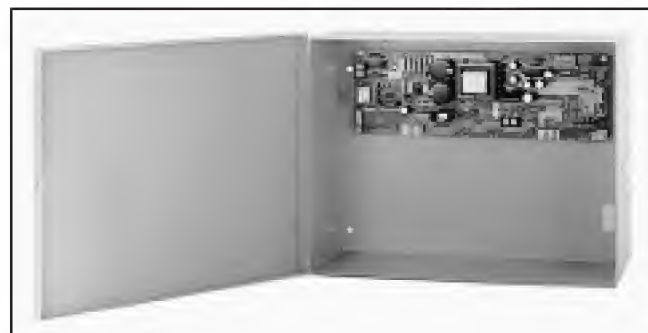
### 7200 Digital Entry Keypad



DynaLock introduces the 7200 Digital Entry Keypad System featuring a narrow, rugged weather resistant design incorporating a concealed mounting plate to defeat tampering.

Additional features include 11 active buttons, 60 user codes, microprocessor based controller with audible and visual feedback, a pre-wired 16 ft. cable and user friendly programming.

### Von Duprin Power Supply for Access Control



A new power supply option from Von Duprin® provides access control and delayed egress functions for a wide variety of electrical products, including EL (electric latch retraction) exit devices.

The 873-AC provides supervision of one zone using an electromagnetic lock. It requires input signals from access control contact, motion detector contact, and motion detector override contact. The 873-DE delayed egress function is also available as a factory installed circuit card. It is ideal for electromagnetic locks and

will operate two zones simultaneously.

### Streamlight, Inc. Introduces Rechargeable Vulcan

Officials of Streamlight, Inc. have announced the introduction of the rechargeable Vulcan lantern.

The Vulcan was designed to meet the market's desire for a

smaller, powerful, waterproof lantern. The compact Vulcan is waterproof to 100 feet, weighs less than 3-1/2 pounds with battery and is only 7-1/2 inches long.



The Vulcan is available in a Standard or Vehicle Mount system. Both systems are equipped with a high-intensity halogen bi-pin bulb, which provides a spot beam of up to 40,000 candlepower.

### IDEAL E-Z Check Identifiers

#### Speed Circuit Tracing

E-Z Check Circuit Identifiers from IDEAL allow one person, working alone, to identify the fuse or power breaker protecting any energized single-phase 110/120V AC electrical circuit. Operation is easy, simply plug the transmitter into a live outlet and

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sweep the receiver over the circuit breaker or a fuse panel. A flashing LED and audio indicator on the receiver announce a positive identification of the traced circuit, requiring no power shutdown.

### Heavy Duty Outdoor Programmable Keypad

Corby Industries, Inc. has introduced a rugged outdoor keypad

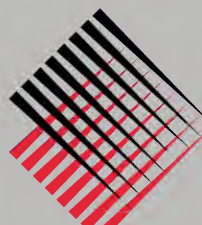


with heavy-duty cast metal keys. This unit is weatherproof and suitable for all environments. The programmable keypad (Model 6066) controls access to one door for up to 36 people. It can be programmed, from the keypad, using a three to six digit code length.

The Programmable Keypad provides up to four input conditions, supporting Request-To-Exit, a silent panic input, and with the addition of a magnetic door contact, it will report a "door ajar" and or forced entry condition.

### Rutherford and effeff Announce Optimum Security


Rutherford Controls announces the advent of the effeff Pneumatic Strike. Now hazardous areas can be secured with a strike which allows ingress and egress utilizing an air-pressurized system. It performs the same way the electric strike does, but is safer to use around highly combustible materials, due to the elimination of an electrical spark.



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Paint rooms, chemical storage areas and hospitals will benefit greatly from this new product, as they can now control access and still exit freely. Available in either fail locked or fail unlocked, Rutherford's Pneumatic Strike is part of its heavy-duty 4 series and includes a Warnock-Hersey fire listing.

### Schlage e.Primus Electronic Key Control System



Schlage Lock Company's new e.Primus Key Control System, a programmable stand-alone electronic entry system, sets new standards for security, key control and access flexibility.

Technologically advanced yet simple to operate and manage, ePrimus system components include:

A "touch key," made of durable stainless steel and mounted on a plastic fob, that features an embedded, electronic serial number which cannot be duplicated or compromised.

The system's lock includes a miniature, implanted computer, programmed to accept only approved electronic serial numbers embedded in the touch keys. Like other Schlage locks, each e.Primus

system lock is designed to withstand the toughest environmental conditions and has been tested for resistance to extreme temperature, humidity, shock, vibration and electro-static discharge.

To open the lock, users simply place the touch key onto the lock's touch port. The computer scans the touch key for its unique serial number. If the serial number matches one in the lock's database, the lock opens. This entire process takes less than one-and-a-half seconds to complete. **TNL**



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# The Old Toggle Bolt Trick



by  
Carl Cloud

The production plant of Armor Safe Company is located in Southern California in the city of Vista. Their safe sales catalog contains a large variety of safe models and applications. They hold the bragging rights to the most complete manufacturing facility on the west coast. Their in house products include custom designed safes for government, military, post office, and ATM's to name just a few. Their residential and commercial safe line will match or exceed many other safe manufacturers. Armor Safes are used by many chain accounts around the country.

One such account is the merchandiser of auto parts. A safe designed for these stores is shown in Photograph 1. In this particular store location, a left-hand door suited the requirements. This rather plain 'B' rated door is outfitted with an S&G 6730 lock. The distance from the center of the dial to the center of the handle shaft is four inches. What is your guess for the handing of the lock?

A look at Photograph 2, answers the question, it's left handed. The small diameter handle cam allows room for the left handing (left-hand door)

of the combination lock. Also, while looking at the door, if you thought the locking bolts would extend to the opening edge, you would have been wrong. This locking mechanism is a little deceptive! Armor Safe purchased Armadillo Safe a few years ago. This bolt work design is the same, or a close facsimile of, that used in the Armadillo Safes.



The front view of the open door of the Armor Safe. The safe is a left hand application with a S&G right hand lock mounted left hand.



A small diameter handle cam moved the locking bolts vertical up and down.



the safe just before the handle pulled out. A view into the handle shaft hole provided nothing but an empty hole.

**M**y initial thought on opening this safe was to locate a center locking bolt, drill a small hole through the body and push the bolt and bolt bar back to release the door. I ran a business card all the way down the opening edge of the door and didn't find any bolts! Hmmm.

I am not too bashful to ask for help or suggestions on an unknown safe. I called Armor and spoke with a very helpful individual. He answered my questions and explained how to solve the problem without any drilling of the safe. Photograph 3, shows the culprit that came loose from the end of the handle shaft.

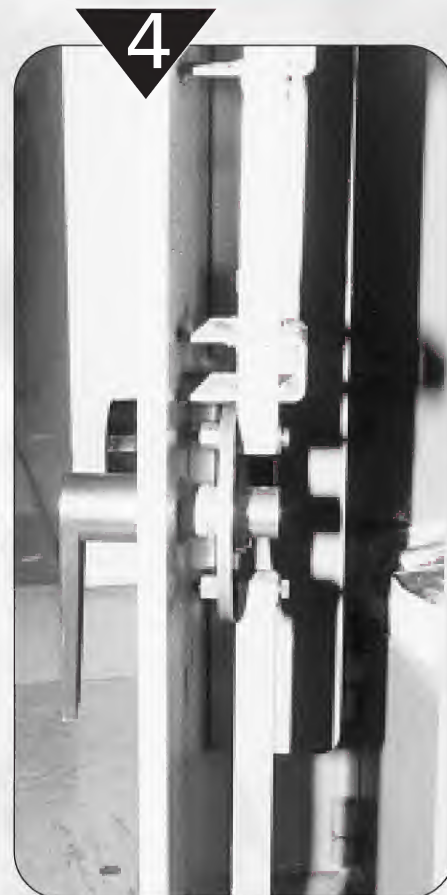
The shaft slips into the hole in the center of this flange. The two holes in the 'ears' fit over the two pins in the

handle cam. The unit is secured to the handle shaft with an Allen set screw.

Photograph 4, is a side view of the door when everything is connected. The handle shaft passes through the door and the handle cam and then extends inward to accept the flange. When the set screw loosened, the flange worked its way off the end of the shaft and fell to the bottom of the



This formed flange is secured to the handle shaft by the Allen head screw. The two holes in the 'ears' fit over the two pins on the cam.



Door edge view of the handle cam and locking bolt assembly.



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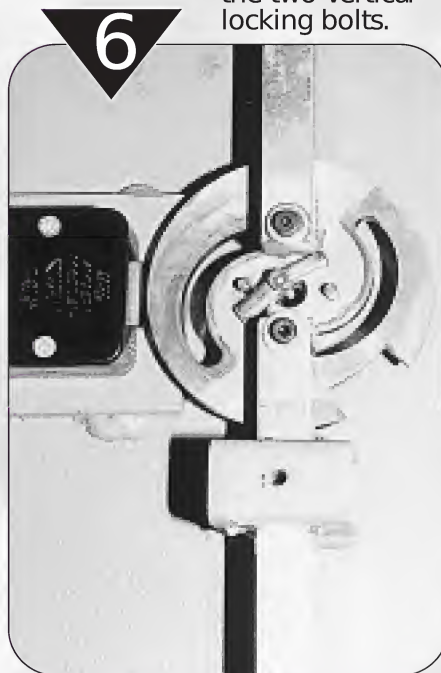




The handle cam in the locked position. The two wings of the toggle bolt have expanded outward and can be used to rotate the cam to unlock the safe.

safe — - the sound the manager heard. The four locking bolt guides cause sufficient friction to prevent the cam and bolt assembly from sliding down the inner face of the door.

The handle cam has been turn clockwise to the unlocked position, retracting the two vertical locking bolts.

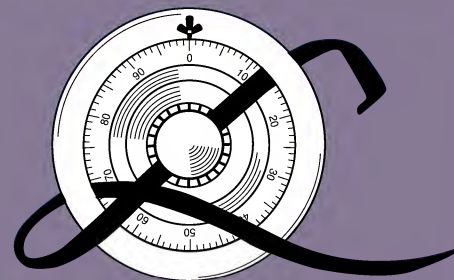
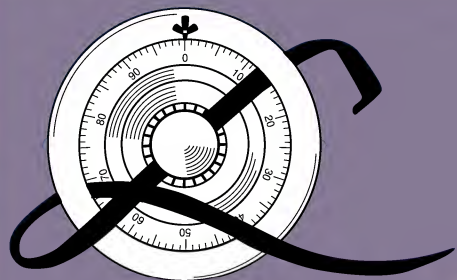


Photograph 5, shows the secret for the opening of the safe. A quarter inch toggle bolt is pushed into the handle shaft hole. The 'wings' of the bolt expand outward. The turning of the toggle bolt butted the wings against the two extending pins and rotated the cam to retract the locking bolts. The cam needed to be turned clockwise to open the safe (see Photograph 6).

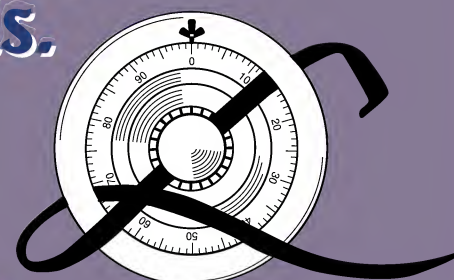
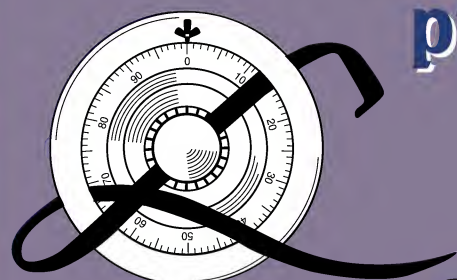
The toggle bolt needed to be slightly modified. Even with the 'wings' folded, the corners had to be filed away to enter the handle shaft hole. The threads on the end of the bolt were burred to prevent the wing end from threading off. In addition, two nuts were run down the length of the bolt to the base of the wings to prevent it from threading up the bolt.

The repair included drilling and tapping a 10/ 32 hole in the center of the handle shaft. A machine screw held a washer on the end of the shaft to prevent the flange coming off. An extra dab of 'thread tite' was applied to both securing screws.

Should you encounter a locked Armor safe with the handle gone, break out the old toggle bolt and in no time the door will be open. **TL**



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by  
Dale W. Libby, CMS

**D**irect drive safes have a large place in the history of safe mechanisms. This simple design was used in vault doors, money chests, fire safes and has been used in toy safes for untold years. The Hall Safe Company was a vast user of direct drive safes, and even introduced false gates on the drive wheel.

Today, we still see direct drive safes in units made by Sentry, and more recently Sisco Safes under the name of The Fire Protector Safe. Additionally, there are many other labeled units, usually made outside of the United States.

No matter who makes the safes, they have many things in common. They are the simplest type of combination lock mechanism because the gates of the wheels ride directly against one edge of the opening bolt bar. When pressure is put on the opening handle or cam lock, the edge of the wheels can be felt when the combination lock is turned.

This article will not go into manipulation of this type of lock. It is very easy to accomplish with minimal tools. However, is manipulation the best or most elementary, rudimentary, and uncomplicated way of opening these locks? It depends on many things, such as time constraints, repair, and the skill level of the safecracker, as we will shortly see. There are many other less professional but more effective ways to defeat these elementary type locks.

Photograph 1, shows a popular miniature toy type safe bank. It has an

1. Typical direct drive type "toy" safe.



2. Inside the toy safe showing wheel and locking bolt.







**3. Small Sisco safe using a key for the bolt retraction.**

operating handle and two wheels. By putting pressure on the handle, the edge of both wheels can be felt when the dial is turned. Although incredibly simple, the manipulation of this toy lock is the same as opening the larger Sentry and Sisco safes.

Photograph 2, shows the inside of the safe with the bolt and wheel. Simple but effective.

In photograph 3, we see the outside of a small Sisco fire resistant safe, Model 1058. To open, the combination is dialed and a key is inserted to move the single locking bar into the wheel pack. Pulling the key opens the door.

**T**he cover of the lock has a slot in it for the safe technician to see the edge of the wheels. This is a reverse view of the wheels with the drive cam on the outside. Dialing the safe open through this hole wastes a lot of time, so I do not advise side drilling to view through this slot on the back cover. (See photograph 4.)

I have removed the back cover to this lock to show the wheel pack of this basic Sisco safe. The gates of the wheels are aligned to accept the edge of the opening bar. (See photograph 5.) In this picture, the opening bolt is at the

**4. Inside door has bolt edge viewing hole.**



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**5. Direct drive  
wheel is held on  
with cotter key.**

3:00 o'clock position. From the outside, it would be at the 9:00 o'clock position.

This lock has three wheels and a drive wheel, which makes it a four number combination. Sentry safes have two wheels and a drive wheel making it a three number combination.

Photographs 6, show a method for manipulating this safe open when you do not have a key. A tension or turning wrench is used in conjunction with a magnetic indicator. For best results, a rigid turning wrench should be used.

To manipulate open, insert the turning wrench and pick the lock.

Once picked, turn the cylinder in the clockwise direction until it stops. Note where the turning wrench indicates on the magnetic indicator. While applying light turning pressure to the turning wrench, slowly turn the dial, taking note of any changes in the indicator readings. When a wheel is aligned with the opening bar, the wrench will move as the bar moves further into the wheel pack.

This difference, although small, can be measured. Once finding a gate, the correct wheel must then be determined. A general manipulation of this lock would take between 15 to 45



**6. Picking lock  
for manipulation  
with turning  
wrench. Wrench  
moves to higher  
number when  
gate aligns.**







7. Repair of door with 3/16 inch pop rivet at #80.



8. Larger Sisco Protector with handle and key lock and combination dial.



9. 1/2 inch hole drilled at 9:00 o'clock at opening site.

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**10. Inside of door is similar to smaller version door.**

minutes. Depending on the tolerances in manufacturing, you may have to pick the lock each time you want to take a reading. This can be a real pain. The easiest way to open any Sisco or direct type drive safe is to drill a small hole near the opening position.

Photograph 7, shows a simple outside pop rivet repair that was made after drilling at the drop-in position. The hole was drilled with a battery operated Makita drill and a sharp 3/16 inch drill bit. I angled in slightly and broke through the inside sheet metal layer. I viewed the edge of the wheels at the drop-in position with a simple otoscope (straight in view). The proper position is about #80 on the dial, or just slightly above the 9:00 o'clock position.

**A**fter opening the safe, I pop riveted both the inside and the outside hole. Total time to open and repair, about 3 minutes. Sometimes being less proficient at manipulation is easier and better, for both the client and locksmith/ safe technician.

A second type of Sisco safe is shown in photograph 8. This safe uses an actual handle to withdraw the lock bolt. A key lock is added for dual locking protection, or non combination lock operation. With this setup, either the key lock or the combination lock can be used to lock the safe, or both together.

This safe had been axed and punched and hammered into submission. Believe it or not, whoever brutalized this safe did not get the unit open.

Since the safe was trashed, and the customer wanted the safe opened now and didn't plan on using the safe

again, I chose the easiest way possible. I drilled a 1/2 inch hole at 9:00 o'clock to open the safe. (See photograph 9.)

Photograph 10, shows the interior of this safe. With the addition of the handle cam, the configuration is basically the same as the first one.

The Sisco safe brand is a generic brand. Many people use this safe style and put their own name on it.

Sisco also features an electronic lock on some of the Protector model lines. On this unit there is a hidden keyhole that accesses an override lock. Should you encounter a malfunction on this unit, locate the two screws between the keypad and turn knob or key lock. It may be hidden under a small cover plate under the escutcheon or a decal sticker. Once the cover plate is removed there will be a keyhole which is to the override lock. Pick the lock to open the safe.

Opening procedures for direct entry locks can be rather quick and easy. The first step in opening such a lock configuration is to determine if in fact you are working on a direct drive type lock. To do so put pressure on the opening handle or cam, and see if you can feel the edge of the wheels when turning the combination dial. Once determined that the unit is a direct drive type lock, you can either manipulate the lock or drill it open. Your skill level will determine what is the easiest and fastest for you, however it has been my experience that in most situations, drilling such a lock will prove to be the quickest procedure.

Drill, Open and Prosper! **RL**





# Automotive Service Kits

When the original concept for Automotive Service Kits was developed, we planned to bring you a concise listing of all the service kits and parts available for all foreign and domestic automobiles. Soon after compiling the material from Auto Security Products (ASP), Borg Warner Division (BWD), and Strattec, for this article, we quickly learned that we were biting off more than we could chew. To accomplish the task at hand, we would literally have to supply you with a book of information requiring hours and hours of data input.

We also learned that even though ASP, BWD and Strattec share similarities in the manufacture and supply of automotive products, each company is vastly different in the way they market and supply such products, making our task even more difficult. While BWD bundles many of their parts into service kits including the lock, housings, tumblers tailpieces, facecaps and such, ASP and Strattec sell few service kits, focusing more on individual parts kits. And while Strattec is strong in the domestic automotive market, ASP's strengths lie in the foreign automotive market.

To make things a tad easier, we asked each company to supply us with a product list and description of their most popular products. This is by no means a complete product listing from either of the companies listed. For a complete listing of either or all manufacturers offerings, I suggest contacting each company for a product catalog.

## Strattec Security Corporation SERVICE KITS

Strattec 3333 West Good Hope Road • Milwaukee, WI 53209 Phone: (414) 247-3333 • Fax: (414) 247-3329	
STRATpack	Part #
GM-AMC-Ford-Chrysler Original 35 Pinning Kit	608771
AMC-Jeep Single-Bitted Pinning Kit	608796
Chrysler Single-Bitted Pinning Kit	608798
Chrysler-Jeep-Eagle Double Bitted Pinning Kit	702962
Ford 5-Cut Pinning Kit	608800
Ford 8 Cut Pinning Kit	703373
General Motors Single Bitted Pinning Kit	608796
General Motors Double Bitted Pinning Kit	702767
General Motors AMC Cap Kit	701035
General Motors Key Boot Kit	700953
GM-AMC-Glove Box Pinning Kit	609862
General Motors Pawl Kit (1974-1982)	701036
General Motors Pawl Kit (1980-1988)	701039
General Motors Truck/ Van Pawl Kit	701037
General Motors Miscellaneous Pawl Kit	701038
Heavy Truck Single Bitted Pinning Kit	609647
Heavy Truck Double Bitted Pinning Kit	703292
Marine/ Industrial Pinning Kit	701936
Marine/ Industrial Service Kit	701937

## Auto Security Products (ASP) SERVICE KITS

ASP P.O. Box 10 • Redmond, WA 98073 Phone: (425) 556-1900 • Fax: (425) 558-1205 • Web: www.carlocks.com		
Item Code	Description	IM, Mover
A-00-100	European Combo Keying Kit	H-Tumblers
A-00-102	European Car Keying Kit	H-Turbo
A-00-140	US Car Fastener Assortment Kit	H-Fasteners only (Door)
A-00-141	US Car Fastener Assortment Kit	H-Fasteners Only (Door)
A-00-142	Door Panel Fastener Import Car	H-Fasteners Only (Door)
A-00-151	Door Panel Fastener Import Car	H-Fastener
A-00-202	1993 Cap Kit 87 Different Caps	A-Face Cap Kit
A-00-232	1995 Asian Shutter Parts Kit	B-Dust Shutters Only
A-00-310	Japanese Door LK Parts Asst.	H-Oops Kit
A-00-311	Japanese Tailpiece Asst. (2 Box)	H-Tailpiece's Only
A-13-101	BMW/ Pontiac Lemans Keying Kit	B-Tumblers
A-13-102	BMW Deadlock Door Keying Kit	H-Tumblers
A-13-103	BMW 4 Track Keying Kit	H-Tumblers
A-13-104	BMW Motorcycle Keying Kit	H-Tumblers
A-14-101	Range Rover/ Sterling Keying Kit	X-Tumblers
A-14-103	Jaguar X177 Keying Kit	H-Tumblers
A-14-104	Range Rover Door Keying Kit	X-Tumblers
A-14-105	Jaguar XJ6 Door & Trunk Key Kit	H-Tumblers
A-14-106	Rover Keying Kit	H-Tumblers
A-14-107	Range Rover Keying Kit (.03)	H-Tumblers
A-14-108	Jaguar Tibbe Keying Kit	H-Tumblers
A-14-230	British Car Keying Kit	H-Tumblers
A-16-100	Datsun Combo Keying Kit	A-Tumblers
A-16-104	Datsun Door & Trunk Keying Kit	H-Tumblers
A-16-105	Datsun Ignition Keying Kit	H-Tumblers
A-16-106	Nissan X/Y Keying Kit (X123)	A-Tumblers
A-16-107	Infiniti Keying Kit	H-Tumblers
A-16-202	Nissan/ Subaru Face Cap Assortment	H-Face Caps
A-17-111	Fiat/ Italian Keying Kit	H-Face Caps
A-17-112	Fiat Keying Kit GT15R/ F14	H-Face Caps
A-18-106	European Ford Keying Kit	H-Face Caps
A-18-107	European Ford Keying Kit	H-Face Caps
A-18-108	Ford/ Merkur Scorpio Tibbe Kit	E-Tumblers
A-19-100	Honda Combo Keying Kit	H-Tumblers
A-19-101	Honda Door & Trunk Keying Kit	H-Tumblers
A-19-102	Honda Ign. Kit (X71, X129, X130)	H-Tumblers
A-19-103	Honda Ign. Keying Kit (X128)	H-Tumblers
A-19-104	Honda Keying Kit 1988 Civic	B-Tumblers
A-19-202	Honda/ Acura Face Cap Assortment	H-Face Caps
A-20-100	Mazda Combination Keying Kit	B-Tumblers
A-20-101	Mazda Keying Kit	B-Tumblers
A-20-102	Mazda New Style Tumbler Kit	B-Tumblers
A-20-202	Mazda/ Asian Ford Face Caps	H-Face Caps
A-21-101	Mercedes Benz Keying Kit	H-Face Caps
A-21-102	Mercedes 2 Track Keying Kit	H-Face Caps
A-21-103	Mercedes 4 Track Keying Kit	H-Face Caps



## Borg Warner Division (BWD) SERVICE/ PINNING KITS

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MFG	Years	Key System	Key Codes	Locks Effected	Kit	Contents
Chrysler	1949-1990	Single Sided 5-Cut	EP 1-3000 ES 1-3000	All Locks	SK 6015	Tumblers/ Springs/ Caps only. Pin tumblers.
Chrysler	1967-1990	Single Sided 5 cut	EP 1-3000	(Sidebar)	SK 6150	Tumblers/ Springs/ Caps. Wafer tumblers for Tilt Wheel (GM Style) ignition.
Chrysler	1994-1997	Double-Sided 7 cut	F0-1384 G0-1384 J1-3580 L1-3580	All Locks	SK 7072	Tumblers/ Springs/ Caps/ Facecaps and selection of lock components.
Chrysler	1998+	Double-Sided 8 Cut	M 1-2618	All Locks	SK 6949	Tumbler/ Springs/ Caps/ Facecaps and selection of lock components.
Chrysler	1998+	Double Sided 8 Cut	M 1-2618	Ignition	SK 6400	Tumblers. Springs for CSS ignition lock. Used on Full Size Vans only.
Ford	1952-1965	Single Sided 5 Cut	FE 0-999 FN 0-999	All Locks	SK 6060	Tumblers. Springs/ Caps only.
Ford	1965-1997	Double Sided 5 Cut	FA0-1863 FB0-1863	All Locks	SK 6000	Tumblers/ Springs/ Caps only.
Ford	1984 1/ 2- 1997	Double Sided 10 Cut	A-B-C-D-E	Ignition	SK 6100	Tumblers/ Springs/ Caps only. All ignitions except Ford import.
Ford	1984 1/ 2- 1997	Double Sided 10 Cut	A-B-C-D-E	Doors Deck	SK 6700	Tumblers/ Springs/ Caps Only.
Ford	1984 1/ 2- 1997	Double Sided 10 Cut	N/ A	Doors Deck	SK 7056	Facecap selection for 10-cut Fords.
Ford	1996+	Double Sided 8 Cut	1-1706X	All Locks	SK 5011	Tumblers/ Springs/ Caps/ Facecaps and selection of lock components.
Ford	1996+	Double-Sided 8 Cut	1-1706X	Door Glove Box	SK 6949	Glove Box Tumblers/ Plastic Facecaps for Huf equipped Fords.
General Motors	1935-1998	Single-Sided 5-Cut	A,B,C,D,E,H, J,K,L,M,N,P, R,S,T,U #000-#999 0#00-9#99 00#0-99#9	All Locks	SK 6035	Tumblers/ Springs/ Caps only.
General Motors	1969-1998	Single-Sided 5 Cut		Ignition	SK 7071	Kiwi Kit. Selection of common uncoded ignitions, door and deck locks, and tumblers/ springs/ caps.
General Motors	1969-1998	Single-Sided 5 Cut		Key Blank Boots	SK 6250	Selection of Primary and Secondary key blank boots in Black, Blue, Gray and Red.
General Motors	1994-Present	Double-Sided 10-Cut	AA00-7N 45	All Locks	SK 6400	Tumblers/ Springs/ Caps/ Facecaps and selection of lock components.
Saturn	1991-1996	Double Sided		All Locks	SK 7070	Tumblers/ Springs/ Caps/ Facecaps and selection of lock components.
Saturn	1991-1996	Double-Sided		All Locks	S6900	Upgrades the old A6900 K it to the current SK 7070 Kit.
Mazda	1983-Present	Mazda M Z13A		All Locks	SK 6800	Tumblers. Springs only.
Toyota	1970-Present	Toyota All		All Locks	SK 6800	Tumblers. Springs only.
Nissan/ Datsun	1982-Present	Nissan/ Datsun		All Locks	SK 7102	Tumblers. Springs only.
Honda	1980-Present	Honda All		All Locks	SK 7103	Tumblers. Springs only.
Import	Various	N/ A		N/ A	SK 7101	Foreign "OOP" Kit. Misc. clips, gaskets and springs.
Import	Various	N/ A		N/ A	SK 7057	Foreign Cap Kit Selection of facecaps for most Japanese import vehicles.
Import	Various	N/ A		N/ A	SK 7073	Foreign Pawl Kit. Selection of pawls for most Japanese import vehicles.
Cam Lock	N/ A	PK Code Series		Cam Locks	SK 6050	Complete cam lock assortment, components and storage cabinet.
Cam Lock	N/ A	PK Code Series		Cam Locks	SK 6070	Tumblers/ Springs/ Key Blanks/ misc. components.

TNL



**T**here are more pinning kits available than you can imagine. They came in every conceivable size and configuration for any type of lock made. However, the possibility of carrying every kit made for every lock would be impossible. In choosing a pinning kit for standard pin tumbler locks alone, there are more choices of styles, sizes and configurations than you would believe. To help narrow the search for the kit that will best suite your needs, the following manufacturers and suppliers of pinning kits are sure to have what you need.

### ESP Pinning Kits

ESP Lock Products has an assortment of pinning kits from the classic wooden kit to the heavy-duty, leakproof metal universal kit to specialty kits. The classic KK-80 anti-spill laminated wood pin kit features a Formica covered lid and sliding bottom drawer. Complete with a locking latch and extra deep compartments, the kit holds over a gross of pins and comes loaded with 40 different color-coded bottom pins and 39 various color-coded top and master pins. A reference chart inside the kit's lid indicates what pin sizes are used by various lock manufacturers. Locksmiths can purchase pins only, the box only, or the loaded kit.

Contact ESP at 978-537-6121 or  
Fax 978-537-1699.

### HPC Tubular Pin Kit

The HPC Tubular Pin Kit (APS-077), contains 800 Combination Pins, 100 Driver Pins, 144 Cylinder Springs

and 20 Retainer Pins, all .077" diameter. The included plug follower and depth key make this a complete re-keying kit when used with a tubular key machine such as HPC's Pocket Cut-Up or either of the HPC/ Scotsman Tubular Key Machines. The Tubular Pin Kit comes in a divided plastic box for easy use. The pin dimensions and the Ace and Fort pin designations are listed inside the box lid. Replacement pins and springs can be ordered through your Authorized HPC Distributor.

For more information on HPC pins, pin kits, and key machines contact  
847-671-6280 or [www.hpcworld.com](http://www.hpcworld.com)

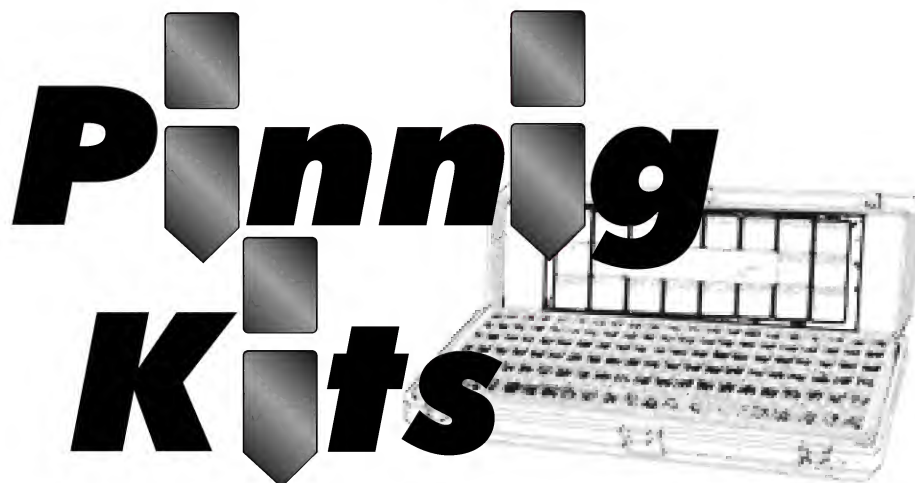
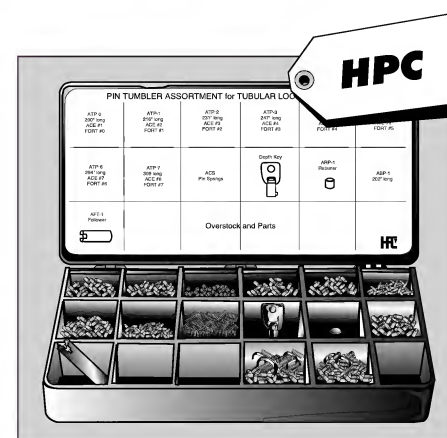
### ILCO-Unican 796-00-8X

The ILCO-Unican 796-00-8X pin kit contains bottom pins from .160" to .360" and top pins from .010" to .200" in increments of .005". There is a pull-out drawer on the side of the metal carrying case that provides storage for the included waffle tray as well as other cylinder tools. The newly updated and revised data table on the inside of the lid provides current pinning parameters for two dozen of the most popular models of lock cylinders. It supplies key root depth information, bottom pin lengths, master pin sizes and top pin requirements to allow use of pins from this kit to closely match original lock manufacturer's specifications.

For more information contact  
ILCO-Unican at 919-446-3321 or  
Fax 919-446-4702.

### LAB Wedge® Pro

The Wedge Pro offers more features than any single pinning kit available anywhere. The Wedge Pro





was redesigned from the ground up, offering several features never before imagined in a pinning kit. The unique patented wedge design, finished in a show car quality metallic green paint, is the only one of its kind. The purpose of the wedge design allows angling of the pinning tray towards the user, making it easier to see and use.

The Dura-View™ pin tray is a clear heavy-duty plastic tray allowing the pin numbers to be stamped under each pin pocket. The Pocket View allows clear visibility of each pins number reference in not just one, but two locations - at the top of each pocket and in the back of each pocket - allowing pin number visibility from any angle. The other unique advantage of a clear view tray with pin numbers stamped under the tray is that after repeated use, the numbers will not rub or wear off like those that are stamped on the surface of the tray. The pin numbers will be clearly visible for a lifetime. No other pin kit available offers this unique pin tray and numbering system.

The Color Passport™ pin chart is plastic coated, protecting the chart from being soiled, worn or tore. It can also be written on with a non-permanent marker and then erased. All pin numbers on the chart are color-coded to match the actual color of the pins in the kit, making your pin search easier.

For more information on LAB pin kits, pins or tools and accessories, contact LAB at: Phone: 800-243-8242, Fax: (860) 583-7838.

### Septon Kits

Septon, Inc. has original pins in kits which contain 100 each of all necessary pins and springs for particular brands. Kits are bright red with draw pull catch and are available for Arrow, Best, Dexter, Falcon Interchange, Corbin Cabinet, Chicago, Rockford, Master, Kwikset, Sargent, Schlage, Weiser, and Yale. Over 124 gross of pins come in the 3/1000 or 5/1000 kits, which contain an up-to-date pinning chart and sturdy eyelets for easy fastening and removal from the service vehicle.

For more information contact Septon, Inc. at 800-537-8752, Fax 914-246-3416, or E-mail [septonic@juno.com](mailto:septonic@juno.com).

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I have noticed over the years that there are some locksmiths who seem to have a slight attitude problem. Now, when I say "slight," I mean it in the same sense that the Titanic had a "slight" leakage problem. It seems that many locksmiths are going out there and acting like Mr. Goodwrench after undergoing a botched hernia operation. I'm not going to name names, but you know who I am... I mean you are.

Now, I realize that dealing with the public can sometimes be about as much fun as getting a razor shave from a blind barber. But remember, you chose to go into a service industry — even though that decision may have been made at a bachelor party between generous servings of Thunderbird wine, tainted brownies, and rubbing alcohol.

I think that as locksmiths, we often lose track of the fact that we should provide our service in a manner that shows appreciation for the fact that the customer is providing us with a way to support our families and our doughnut habits. We shouldn't treat those customers in the same manner as a baby treats a diaper.

We should also understand that if we did not get the helpless, mechanically declined type of customer, then our business would slow down to a trickle. Most of the self-sufficient types find a way to take care of their own lock problems, cleverly utilizing either a crowbar, a hammer or a forklift. That leaves us with the complainers, bless their whiny little hearts.

Remember, potential customers only come in limited numbers. A lot like the goony-bird, which by the way, finally became extinct because it had a habit of wandering onto air strips while



forgetting that it hasn't been able to actually fly for about 95,000 years.

Now, I am not suggesting that our customers are threatened with extinction — because I'm sure someone has put fences around those airstrips by now — but my point is, we have to be careful to maintain their patronage by not treating them like the brother-in-law who stopped by for lunch and stayed through the next presidential administration.

Now, some of you are probably saying to yourselves, "How can I,

as a locksmith, attain a better attitude towards my customers and co-workers?"

Others of you might be saying, "I don't see a problem with my attitude, you sniveling little mama's boy!"

Fortunately, in this age of enlightenment, there are methods available to help deal with the pressures of our job. Here are a few you might try:

#### Positive Affirmations.

With this method you would start each day by looking in the mirror (for many of you, this in itself should be enough to drastically change your attitude) and say to yourself something positive such as: "I am a competent locksmith, dedicated to the service of others and darn it, people like me; and I have almost no desire whatsoever to squeeze someone's earlobe with a pair of pliers."

Or you could say: "All of my customers are magnificent cosmic creations, even the difficult ones, and I definitely do not think that someone should heavily medicate their water supply."

Now some of you hardcore grumps might want to try weaning yourself off your crankiness by attempting something more attainable such as: "I will try the decaffeinated coffee and will not be charged with assault or brandishing of a key-cutting machine until well into the afternoon."

#### Meditation

This is the process by which you repeat to yourself a relaxing, personalized mantra, given to you by a certified meditation instructor. My mantra, which I find very relaxing is: "Why yes Mr. McMahon, I did enter the Publishers' Clearinghouse Sweepstakes. Are those TV cameras behind you?"



### Visualization

**W**ith this method you would take a moment off during a stressful situation and picture yourself in more pleasant surroundings. My favorite is to picture myself on a sunny beach, having a pina-colada, while managing a very successful mail-order bride business.

Another visualization you might use, would be to imagine that you have entered your mother-in-law in a snooping contest and she wins the first prize, which consists of a one-way trip to the constellation Orion via the Hale-Bopp comet, plus, a case of beer, which she graciously gives to you before she leaves on her trip.

You might picture yourself in a casino playing the dollar slot machines. You are down to your last dollar when all of a sudden you notice that the woman who was playing the machine next to you, forgot her beer and it is almost completely full. You cannot believe your good fortune.

A final method for relaxation which some have used, but I do not recommend, is to take a couple of snorts of WD-40, and then hold your breath for about four minutes. Most of those that have utilized this method are once again living with their parents and having their meals spoon fed to them, but they seem very relaxed.

Since we are in a service oriented business, it might be helpful to look at the origins of the word "service" itself. Service is derived from the Latin word "sirvoso," which is the name of a large green hat worn by maidens during a pig-roasting ceremony. OK, no help there. Let's check the dictionary under "service" which says:

1. The occupation or duties of a servant;
2. To wait on or be a servant to.

No, I think I'd need to get paid a little more money to act like that. Let's not get carried away with this.

How about a modern definition of service? Something like: The performance of a task for someone, done in a pleasant, polite manner, in exchange for cash or a check, that hopefully does not display the same physical properties as an over-inflated basketball dropped from the roof of a twelve story building.

Perhaps some concrete examples of how we might better serve our customers would be helpful. Let's start with how we answer the phone.

Right way: "Acme Lock, your tour guide in the wonderland of home security needs, hopes and fantasies."

Wrong way: "Acme Lock, where time is money and I ain't got much of either so make it fast."

From a consumer's point of view, the mark of a good business is how it handles the customer's complaints. Here are some examples of

telephone etiquette when responding to those concerns:

Right Way: "Acme Lock, what's that Ma'am, You say you don't like the color of the keys we made for your car? I'll be right over to make you a new set, if I can figure out how to unhook myself from this kidney dialysis machine."

Wrong Way: "The Steering wheel we worked on came off your car at 70 miles an hour going around a curve? But the key we made for the car works OK! So

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what's the problem?"

Right Way: "You say your house is sinking ever since we re-keyed your locks? Well, we'll be happy to replace the entire foundation plus rotate your car tires for no extra charge."

Wrong way: "The lock we installed yesterday fell off and killed your pet weasel? That sounds like a personal problem to me."

When servicing a lockout, the locksmith must keep in mind that

the customer's biggest concern is not the expense, but the embarrassment of having put himself in that situation. Therefore you should put the customer at ease by making him feel that he is not the only one that this has ever happened to.

For example, you could say: "Oh don't feel embarrassed, I have to service lockouts all the time down at the rest home."

The wrong way to handle this situation would be the following:

"Geez, you must feel like quite a shlemozel leaving your keys inside like that. You'd probably forget your hair too, if it wasn't glued on your head."

No, we must be more sensitive than this if we expect to retain our customer base, because the next time that customer goes to call a locksmith, he will say to himself, "Let's see, was I well treated by that last guy, or did he act like he was in a hurry to get to his Charles Manson fan club meeting?"

Sometimes we must provide a service that is not taught at locksmithing school. One of my actual customers was an elderly man who walked with a cane. While he stood there watching me rekey his locks, he had occasion to cough, at which point his pants fell to his ankles without the benefit of undergarments.

Since he could not bend over, I had to hike up and cinch his pants for him. No matter how tightly I cinched the belt, the pants would fall back down every time he coughed. I felt bad for him, so when I finished the job I knocked \$20.00 off the bill and suggested that he should consider investing that money in a pair of suspenders or a large supply of cough drops.

I have to admit, though, that some of the customers are just outright impossible, such as the lady who had me change the keys to her lock and then for some reason accused me of switching not just the tumblers, but the entire lock and strike plate for an inferior brand. Nothing I said could convince her that this was the same lock that she had been using for twenty-five years. She kept insisting that I should put her original lock back on the door. Finally I gave in and confessed.

"You're right. I stole your lock and I planned to sell it to a band of traveling gypsies and then use the money to buy out Bill Gates' interest in the Microsoft Corporation," I said.

"You'll be hearing from my lawyer," she said.

"Why, does he need his locks changed too?" I asked.

Chalk up another satisfied customer. **TNL**



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# TUFLOC®

## Car go Lock



Vehicle cargo theft is a low-risk, high profit business that is costing service and delivery companies millions of dollars in lost merchandise and equipment every year. As a result, vehicle operators are increasing their security measures and turning to locksmiths for specialty propose cargo locks.

Cargo thieves see delivery vans and service trucks as easy targets. Too often, the only thing between a thief and a vehicle's contents is a standard door lock or padlock, ineffective devices against a determined crook with a crowbar. Within seconds a thief can dismantle a traditional lock, grab the goods and flee the scene.

Lock manufacturers like Esmet are responding to this problem by designing special devices that thwart smash and grab cargo thieves. Recommending these products can be helpful to vehicle operators and profitable for locksmiths. TUFLOC, is one such product.

TUFLOC was developed with utility, service, and delivery vehicles in mind. Although no lock device guarantees that criminals won't attempt entry, TUFLOC was developed with all these characteristics in mind (see Photograph 1).

Eliminating the shackle and hasp, TUFLOC does not have the weak points of conventional padlocks. The device has two interlocking wings made from nickel plated investment cast 304 stainless steel. The wings are compatible with a variety of vehicle and building closures, including inward, outward, double-

swinging, sliding and roll-up doors. It can be mounted flush, at a 90-degree corner or even on an outside corner (see Photograph 2). TUFLOC's bolt holes are recessed to resist tampering. Carriage bolts are positioned low within the wings reducing the possibility of forced entry.

The rekeyable Medeco high-security lock cylinder can be keyed different, keyed alike or master keyed. The cylinder is built into one

of the wings and engages and disengages the bolt assembly. It is strategically positioned near the device's main body and has hidden hardened steel head crosspins that provide added drill resistance (see



**1.**

TUFLOC was developed with utility, service, and delivery vehicles in mind.





**2.**

The TUFLOC can be mounted flush, at a 90-degree corner or even on an outside corner.



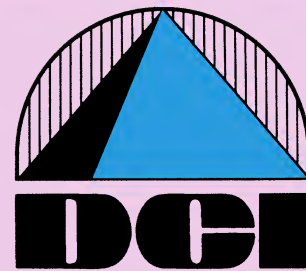
**3.**

The rekeyable Medeco high-security lock cylinder can be keyed different, keyed alike or master keyed.



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Photograph 3). The bolt head rotates and has a tungsten carbide insert that resists cutting at the locking point. In fact, saw attacks on TUFLOC take longer than all other ASTM-tested locks.

The TUFLOC 50 series is perfect for high-security, and the 60 series, fabricated from Ilium alloy, meets military specifications. Left and right hand models are available.

Interestingly, all of TUFLOC's physical features make a strong and clear statement to criminals: Those attempting to beat the product

face a very difficult challenge. In communicating that message, TUFLOC creates an emotional barrier most criminals are reluctant to cross.

There are other vehicle lock products on the market to consider, however, each has its own weak link.

### Internally mounted locks

Internally mounted electronic deadbolt locks are available. However, a thief might not realize that an internal lock has been installed until he attempts to break into the vehicle. Even if the

attempt fails, the vehicle owner could be left with hundreds of dollars in door and paint repair.

### Integrally mounted locks

Although integrally mounted locks offer a clean exterior look to a door, installation is often difficult and reliability suspect. Installation sometimes involves drilling larger holes through doors and installing cumbersome hardware. Because these locks are vulnerable to jamming, often by shifting cargo, it is important to assure that nothing can interfere with the lock mechanism. Also, because the exposed lock cylinder lends itself to slam-hammer attacks, customers vulnerable to this type of attack may want to look at alternate products. Locks that employ the chassis or bumper for security are more difficult to install. All integral locks lack the visible security that inhibits break in attempts.

### Standard Padlocks

Some people will insist on using inexpensive padlocks. There is a bit of advice that you can give them to make a padlock more effective: Position the lock in an odd place on the vehicle making it difficult for a thief to access. Example: A roll-up door can be creatively locked by drilling a hole in the vehicle's floor, passing a chain through the opening and securing it to the backside of a bumper with the padlock. This placement makes the padlock somewhat difficult to pry off, especially on moving vehicles.

A cargo lock should be a visible thief deterrent, not an attraction, because most thieves look for vehicles equipped with standard locks. When they see specialty locks, they realize that quick entry will be extremely difficult and move on.

Operators report that specialty locks are effective. TUFLOC is significantly reducing cargo theft for major overnight delivery companies and numerous fleet and service businesses.

As long as thieves see fleet and delivery vehicles as easy targets, protecting cargo remains an ongoing challenge. The best advice to customers looking for specialty door locks: use a device that makes a criminal's job difficult, if not, impossible. TUFLOC is a good option to consider. **TNL**

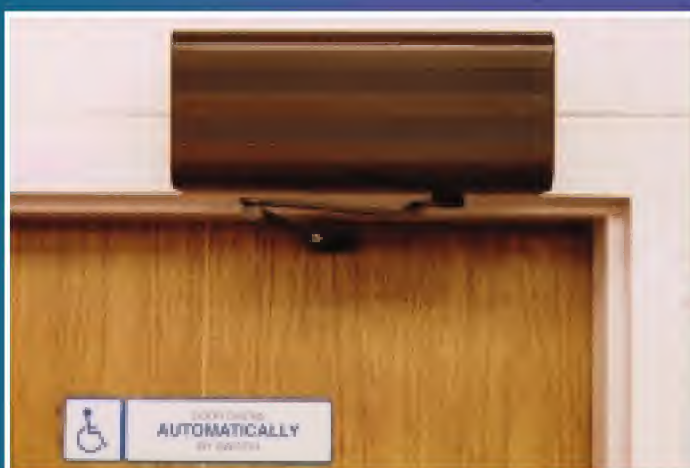


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# Dor-O-Matic's Equal Access



**1. The Senior-Swing is a heavy duty, versatile two-in-one door operator exceptional for its smooth electro-mechanical operation.**



**2. Middle-Swing is a cost-effective, low-energy powered door operator designed to make it easy to comply with ADA.**



**3. The Junior-Swing is a lighter duty door operator. This system is quiet and requires little energy to operate.**

**M**aking public buildings accessible to the nearly 49 million Americans with a disability is no longer a matter of convenience — or conscience. It's the law. Changes in building code requirements have made it necessary to provide access for the handicapped on exterior and interior entryways in public buildings and institutions. Throughout the country, individuals and associations are filing numerous lawsuits to promote compliance with the Americans with Disabilities Act (ADA). Professionals who work daily with ADA issues agree that an owner is more likely to be sued by a person with a disability or by an advocacy group rather than by the Department of Justice (DOJ), and access cases typically originate with complaints by customers or employees who feel they were denied access.

According to the Architectural and Transportation Barriers Compliance Board, the agency who wrote Americans with Disabilities Act (ADA) guidelines, any new construction or renovation of a public building after 1993 must comply with the United States Department of Justice's requirements for accessibility. The guidelines, as published in the Federal Register, encompass more than 170 pages of detailed regulations. The guidelines include requirements for



door size, positioning, mounting height for controls and operating force for accessible public entranceways.

**T**he most basic requirement is that doors are wide enough for wheelchair-bound persons to swing the door open without hitting the chair and allows him or her to maneuver through the doorway. With standard construction and tolerances, a 36-inch door is the narrowest a door can be to comply if standard hardware is used. However, when complying with ADA standards and codes,

much more than the width of the door opening needs to be considered. For instance, door stops and thresholds can prove very hazardous.

The question for many becomes how to provide accessibility without diminishing the effectiveness of the entrance design while still retaining low cost and offering optimum versatility. And, how can contractors and construction engineers keep up with all the requirements of ADA?

Denny Lawson, vice president of sales and marketing for Dor-O-Matic, Automatic Door Division recommends that architects and contractors familiarize themselves with the product lines of reputable manufacturers whose products have already been designed and constructed to comply with ADA.

"It's our responsibility as the manufacturer of a full line of automatic door systems to assure that our products meet with rigid ADA requirements," said Lawson. "Dor-O-Matic is committed to helping provide the physically disabled with equal access to public buildings and retail stores. And, we are equally committed to helping the building construction industry meet ADA guidelines with minimal cost and reconstruction. More than forty years ago Dor-O-Matic started as a pioneer in the automation industry. From the very beginning the company's philosophy has been value with safety - and it still is. All of our systems are characterized by careful craftsmanship and superior safety features that make them far safer than industry standards," Lawson added. "And it's important that we offer several types of reliable automatic systems that can not only handle large traffic flow but can accommodate the special needs of many."

**S**ection 4.13.12 of the ADA Guidelines is very specific in its requirements regarding access power door openers and Dor-O-Matic offers some specific products that are suitable for both interior and exterior installations. The Senior-Swing is a heavy duty, versatile two-in-one door operator exceptional for its smooth electro-mechanical operation. **(See photograph 1.)** Usually, pedestrians walk up to the Senior-Swing door and push the door open as if it was a manual door. After the door is manually opened approximately 5 degrees, the Push-N-Go feature takes over and continues to open the door - slowly and automatically to the full open position as the pedestrian walks unimpeded through the open



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doorway. When the door is opened as a result of Push-N-Go, the door will stay fully open from 1 to 30 seconds depending on the time delay chosen. Therefore, the door can be used by both the handicapped and pedestrian traffic, but the door will be automated only as needed by the handicapped when one of the push buttons or push plate actuating switches is actuated. And, the door will operate as a manual door for pedestrians who do not use any of the actuating switches. Because Senior-Swing is a low energy power door operator as defined by ANSI A156.19, it does not require carpets, guide rails or other safety devices.

**B**uilt for rugged conditions, Senior Swing can handle doors up to 200 lbs. on applications such as hospitals, schools, universities, libraries, banks, shopping malls, office buildings or restaurants. It is easily installed on practically any door frame including aluminum, wood and laminate plastic. The Senior-Swing operator can be mounted overhead for center pivot doors or surface applied for center pivot, butt hung or offset pivot doors.

Another Dor-O-Matic product that is especially well suited for retrofitting is the Middle Swing. (See photograph 2.) Middle-Swing is a cost-effective, low-energy powered door operator designed to make it easy to comply with ADA. With similar features as the Senior-Swing, this door will safely stop and return slowly to a closed position if an object is encountered during the opening cycle.

For ideal interior accessibility, Dor-O-Matic offers the Junior-Swing, a lighter duty door operator. (See photograph 3.) This system is quiet, requires little energy to operate, and like the Senior-Swing, does not require the numerous safety guards needed for most commercial automatic doors.

**B**eyond manufacturing a full line of automatic, swinging, sliding and folding doors, Dor-O-Matic products have superior

safety features that surpass industry standards, and the company's commitment to value provides performance levels that exceed customer expectations.

"Because Dor-O-Matic's products meet all ADA and ANSI/BHMA standards, we can help take the guesswork out of entry door design and construction," Lawson said.

For more information on the American with Disabilities Act or American National Standards

Institute building codes and regulations, please call the U.S. Architectural and Transportation Barriers Compliance Board at 1-800-USA-ABLE.

For more information on Dor-O-Matic products contact:

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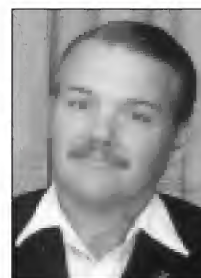
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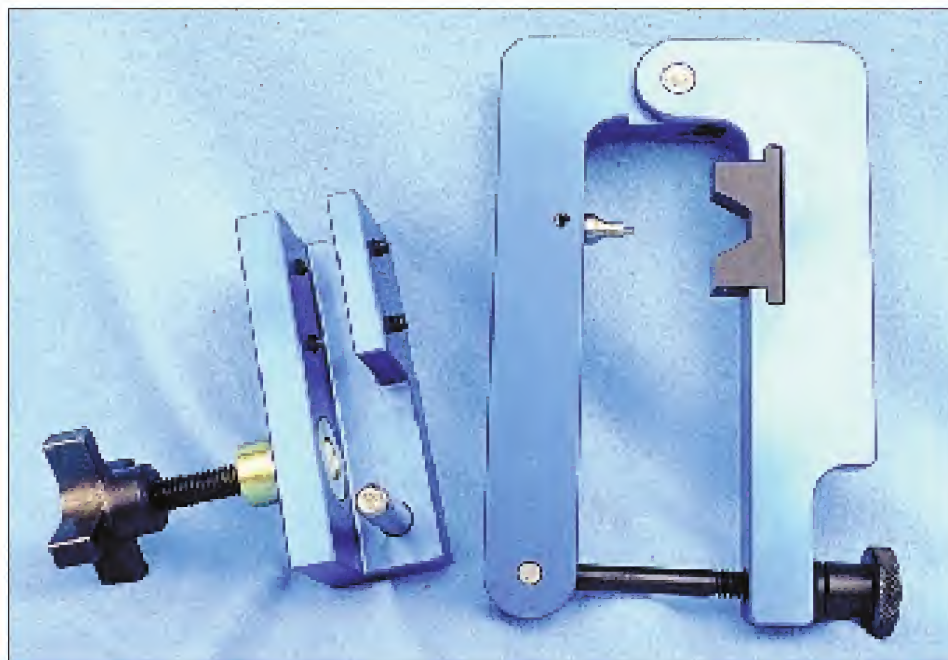


# BEGINNER'S CORNER

## The Singertech Lever Neutralizer



by  
**Jim  
Langston**



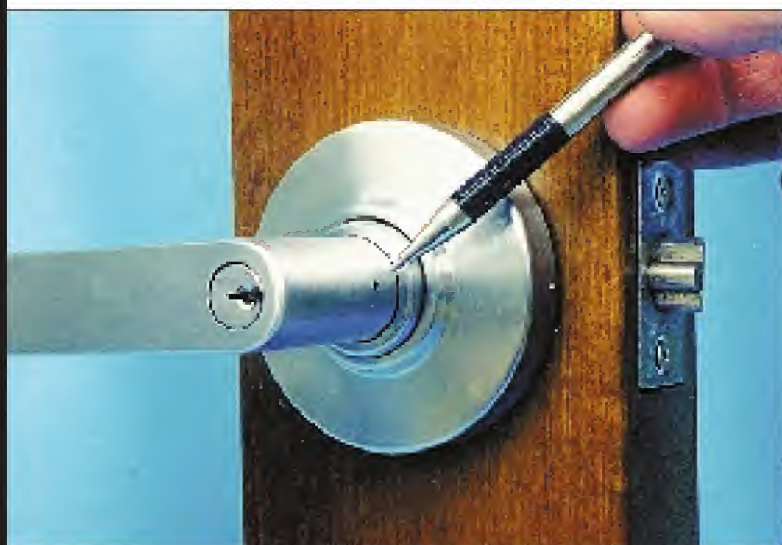
**1. The Neutralizer is made up of two main parts, the Lever Neutralizer Retainer Press and the Lever Neutralizer Puller.**

**T**he Lever Neutralizer is the latest hot tool on the market. This tool will change your outlook on opening and disassembling Grade 1 and Grade 2 levers that have no available working key or that have been

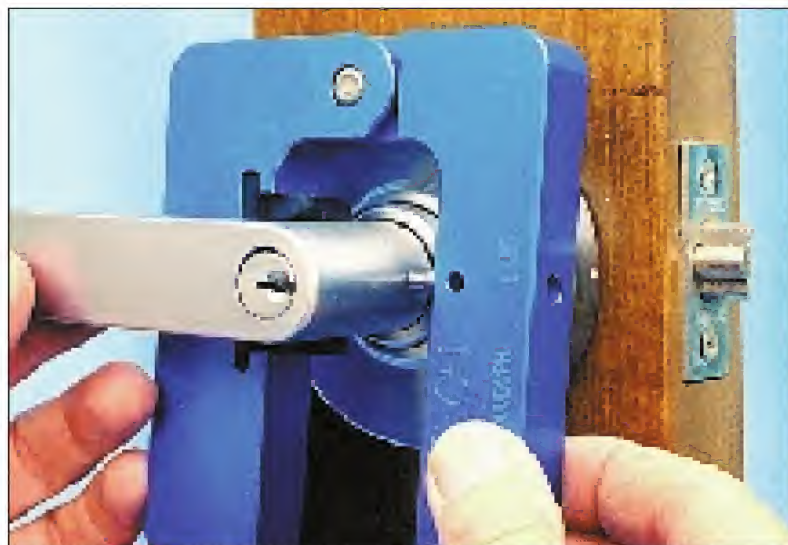
vandalized and could not be opened with a key. I have encountered lever locks that I could not pick or impression a key for. This tool will enable you to remove the lever and open the door with a screwdriver.



**2. The Lever Neutralizer Press has a hardened steel pin designed to depress the lever retainer pin.**



**3. The Lever Neutralizer Press must first be fitted in the retainer hole on the lever.**



**4. The knurled knob is tightened until the pin shoulders against the lever.**





**5. Install the Lever Neutralizer Puller onto the lever.**

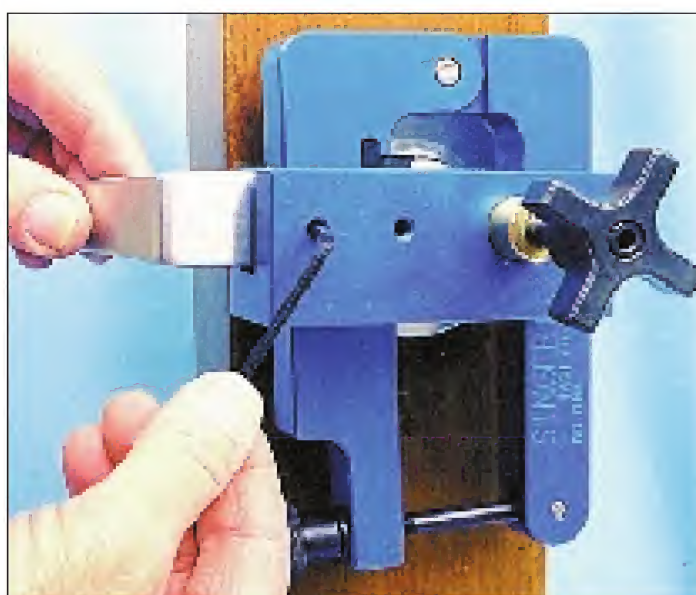
Removal generally takes about 60 seconds and results in no damage to the lock.

**T**he Neutralizer will open a large variety of grades 1 and 2 levers such as Schlage Rhodes, Schlage A1 Series, Schlage Oly, Schlage S Saturn, Schlage Vandalguard, Sargent, Baldwin, Cal Royal, and many others. Of course, repetitive use may cause the lock retainer to lose its effectiveness, but for a one time use,

there will be no noticeable damage to the lever retainer.

Just think, if you have a lever handle with a Medeco cylinder in it and it was locked on a door, all you would need is the lever Neutralizer to open it. Here is how it works:

The Neutralizer is made up of two main parts, the Lever Neutralizer Retainer Press (LNRP) (on right in



**6. It is important to adjust the four adjusters on the puller to insure the straightest possible pull on the lever.**

photograph 1), and the Lever Neutralizer Puller (LNP) (on left in photograph 1).

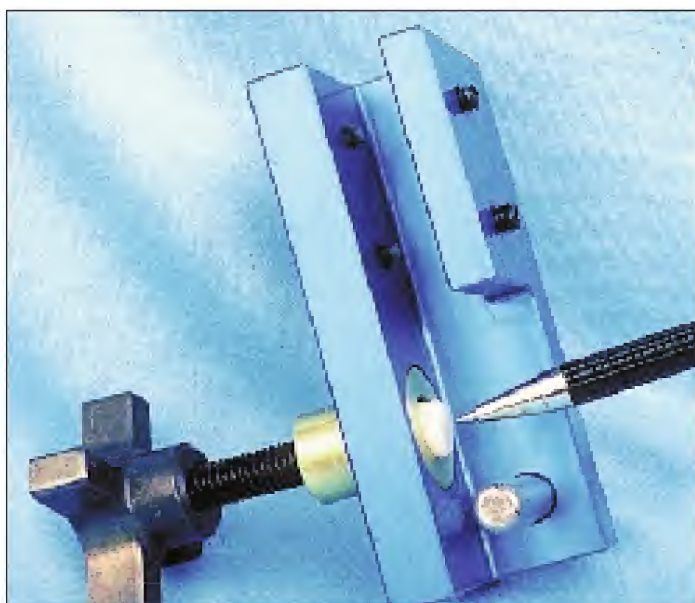
The Lever Neutralizer Press, (see photograph 2), has a hardened steel pin designed to depress the lever retainer pin. The Lever Neutralizer Press must first be fitted in the retainer hole on the lever. (See

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**7. A plastic foot that makes contact with the lock cylinder which puts pressure on the face.**

photograph 3.) The knurled knob is then tightened until the pin shoulders against the lever. (See photograph 4.)

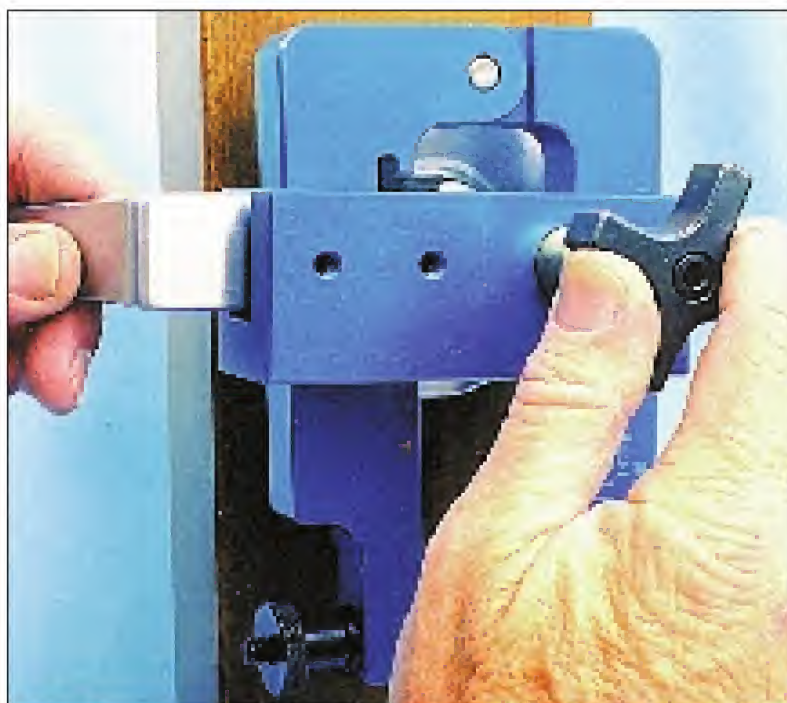
**N**ext, install the Lever Neutralizer Puller onto the lever. (See photograph 5.) It will be necessary to install it upside down if it is being used on a left handed door.

It is important to adjust the four adjusters on the puller to insure the

straightest possible pull on the lever. (See photograph 6.)

The set screws, or adjusters, have a plastic backing to prevent scratching the lock.

Now, if you look at photograph 7, you can see a plastic foot that makes contact with the lock cylinder which puts pressure on the face.



**8. Turn the four pronged hand knob clockwise until the plastic foot on the puller shaft contacts the cylinder.**

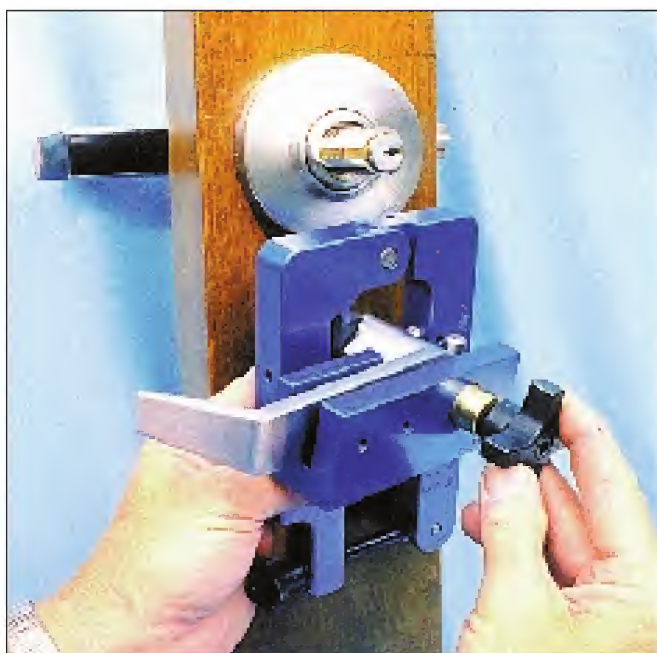
As demonstrated in photograph 8, turn the four pronged hand knob clockwise until the plastic foot on the puller shaft contacts the cylinder. Continue to turn and the lever will be pulled past the retainer, removing it

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**9. The lever will be pulled past the retainer, removing it from the spindle.**

from the spindle. (See photograph 9.) Notice also in photograph 9 that the cylinder is left in the lock body. You can now remove the cylinder and open the lever with a screwdriver.

Photograph 10, shows the lever after it has been removed from

the lock. You can see in photograph 11, how the plastic foot fits inside the lever handle.



**10. the lever after it has been removed from the lock.**



**11. This is how the plastic foot fits inside the lever handle.**

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Caution must be exercised when using this tool on any lock which has been disassembled by some forceful technique prior to using the LNR and the LNP. Damaged retainers may not be capable of being fully depressed. In some cases, as stated above, repeated use on the same lock could cause damage to the retainer.

**NOTE:** The neutralizer is not recommended for use on Corbin Russwin levers because of a potential for damage to the retainer.

Singertech is currently working on a solution to this problem and also for the knob locks.

All in all, in my opinion, this is a very good tool when used properly.

For more information on the Singertech Lever Neutralizer contact:  
Singertech  
1925 Verne Roberts Circle  
Antioch, CA 94509-7910  
Phone: (925) 777-0401  
Fax: (925) 625-6130

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# TECHNITIPS

## '98 Year-End Prizes!



**Grand Prize**  
Silca Bravo Duplicator



**1st Prize**  
HPC's 1200PCH  
Punch Machine



**2nd Prize**  
Mas Hamilton's Auditcon  
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**3rd Prize**  
Curtis 2100 Duplicator



**4th Prize**  
SDC Magnetic Lock,  
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**6th Prize**  
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**7th Prize**  
\$500 in ASP  
Auto Locks



**8th Prize**  
\$500 in Strattec Auto  
Products



**9th Prize**  
Arrow Exit Device  
and Mounting Kit



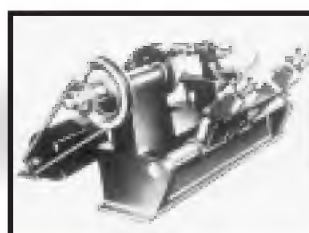
**10th Prize**  
Dewalt Cordless Drill



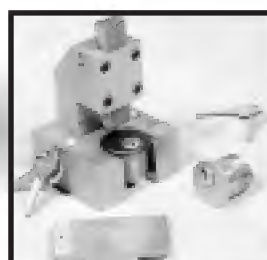
**11th Prize**  
Detex ECL-8010W  
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**13th Prize**  
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**15th Prize**  
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- All Lock Ford or GM Kwikit
- Aero Lock Tryout Key Set
- Strattec Racing Jacket
- HPC Pistol Pick™
- Sargent And Greenleaf
- 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- Ilco Key Blanks (100 Blanks)
- PRO-LOK® Pk 15 Professional Lock Pick Set
- Tech Train Training Video
- Sieveking Products
- Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (50 Blanks)
- High Tech Tools
- LaGard Combo Guard



**16th Prize**  
High Tech Tools  
2500 Pro Set



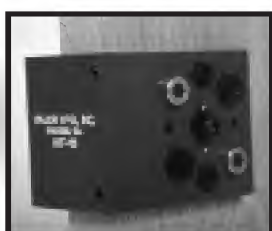
**17th Prize**  
Slide Lock's  
Master "Z" Tool Set



**18th Prize**  
ESP Products Sampler



**19th Prize**  
Baxter J V-1 and  
J V-5 Code Books



**20th Prize**  
Major  
Manufacturing's  
HIT-111 Drill Guide



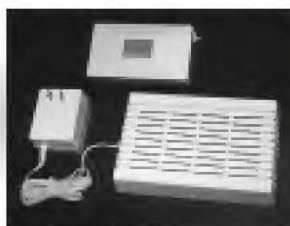
**21st Prize**  
Falle Pick Set From Mark  
Bates Associates



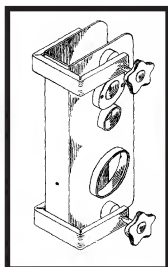
**22nd Prize**  
Sieveking Products  
Squeeze Play



**23rd Prize**  
ABUS Padlock's Marine  
Padlock Display



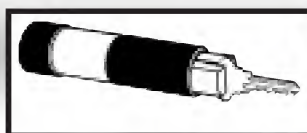
**24th Prize**  
Rodan's AV 100 Heavy  
Duty Door Annunciator



**25th Prize**  
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**26th Prize**  
M.A.G. Engineering  
Sampler



**27th Prize**  
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Jake Jakubowski, Technitips Editor,  
**The National Locksmith**,  
1533 Burgundy Parkway, Streamwood,  
IL 60107-1861 or send your tips via  
E-mail to: Natlock@aol.com

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**28th Prize**  
Book — 15  
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Technique by  
Jake  
Jakubowski





# BWD KWIK1IT WINNER: Volvo Ignition Removal

The Laserkey ignition lock with diecast tumblers used on 1988 Volvo 760 and 780 models through late 1992 vehicles have had problems with the metal fatiguing and the tumblers breaking. Late in the '92 model year, Volvo changed this ignition to plate-style tumblers which are not subject to the fatigue problems of the diecast tumblers.

The ignition styles are similar although the new ignition (which carries a cost of about \$50.00) has a different looking tailpiece than the older style ignition. However, the newer style is designed to work in both the new and the older housings. To repair either style follow these simple steps:

1. Disconnect the battery cable.
2. Remove the shroud. There are Torx screws holding the two pieces of the shroud together. Remove the tilt lever from the column. There is only one screw holding it in place.
3. Remove the ignition face cap. The cap is thin and if you use a hacksaw to score a groove on it, you can use your face cap pliers or a screwdriver to remove the cap.
4. This is where the fun starts. You have to remove the face of the cylinder. It is held in place by a "C" ring under the lip of the housing. As shown in illustration 1, you can drill a small hole or two in the lip of the housing to gain access to the "C" clip. When you do pry the clip out, the face of the cylinder and the two roller bearings will also come out.

5 Use a 1/4" drill bit and drill at the twelve o'clock position right under the first detent. (See illustration 1A.) Drill that hole to a depth of one inch.

6. Now you can push the retainer pin down to remove the cylinder. DO NOT force the retainer down (if you try to

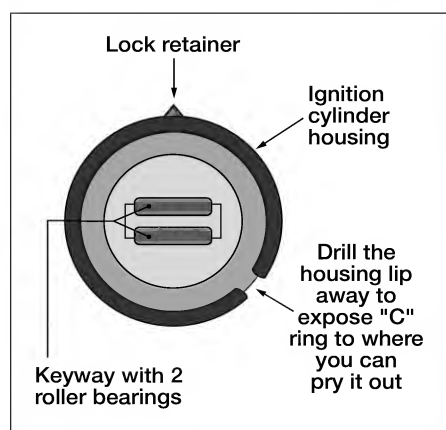


Illustration 1.

## A Few Words From Jake...

A while back, I was invited up to Virginia to speak to a group of locksmiths. The topic of conversation was to be the importance of knowledge and education. I'm not going to bore you with a word-by-word recounting of that speech, but I will give you a brief summary of what was said.

I told the assembled locksmiths that not only is it important to seek out and acquire all the knowledge that they can, but that it is equally important to share that knowledge with others. Sharing knowledge is like physically exercising a muscle. The more exercise, the stronger and more beneficial the muscle becomes. Stop exercising, and the muscle begins to lose its tone, and then, its strength, and finally, it withers and becomes virtually useless.

Unshared knowledge is like a book that has been written and never read: it might be one heck of a great story, but nobody knows about it.

Sharing knowledge is what this column is all about. Somebody gets an idea or finds a better way to do something and they send it in to me. I print it, somebody else reads it and puts it to use. The next thing you know, thousands of locksmiths across the country (actually, around the world) are doing their job easier because one person decided to share an idea, experience or experiment with you.

On the other hand, if no one was willing to share their knowledge, ideas and tricks, this column would make for some really dull reading. Fortunately, I have many educated readers who are willing to share their knowledge with other locksmiths. This enables me to cobble together a column that is a learning experience for a lot of locksmiths — new and old — every month.

To those tipsters that send me their tips, I say a very grateful "Thank You!" To those who have been "thinking" about sending something in for publication, I say: "Just do it!" Besides, if you do send me a usable tip, when I print it, you'll probably get a warm and fuzzy feeling inside knowing that you've helped other locksmiths. And, even if you don't, you'll get some great prizes and you'll qualify for our fabulous year-end prize drawing!

Y'all heah what I'm sayin', now?



by Jake  
Jakubowski

force the retainer down, it will break into two pieces and you will have to drill the lock housing apart to remove it). If it doesn't go down easily at first, drill a little deeper to give the retainer room to drop.

7. After removing the old ignition, use a screwdriver to turn the electrical switch inside the column to the "ON" position and insert your new lock. The entire procedure takes me less than half an hour. ASP has a kit for this. It is ASP Lock Kit #A32-102.

Tom Tusing  
Florida

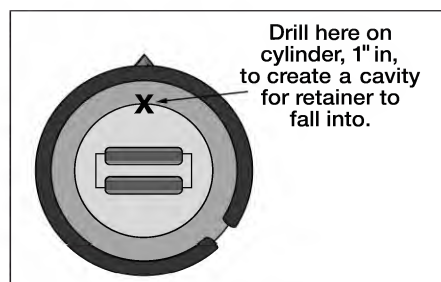


Illustration 1a.



## AERO LOCK TRY-OUT KEY SET WINNER: Clip Removal tool

Here's a handy tool that I made that proves useful for removing nearly all types of lock clips which are a 1/2" or so in diameter. It is an easy to make tool that can save you a lot of time in the field.

To fabricate this clip removal tool you will need an old hacksaw blade (do not use the unbreakable type as they will not keep the bend you need), a five inch piece of 5/8" diameter wooden dowel, and a 1/2" (inside diameter) piece of copper or aluminum tubing.

In Illustration 2, you can see how I cut the blade down to 3-1/2" long, ground the teeth off and ground a 1-1/2" long tang. Before assembling the tool, I ground a half-moon shape in the end of the blade as you can see. Next, cut a slot in the end of the dowel (for the tang of the blade), slip the tube over the dowel and grind flush with the end. The tube prevents the dowel from splitting.



Next, put the modified hacksaw blade in a vise (with the tang pointing upward, line it up with the slot in the dowel and drive the tang into the dowel until the "shoulders" of the blade rest against the dowel. Finally, bend the blade to a shallow angle (about 25-30°).

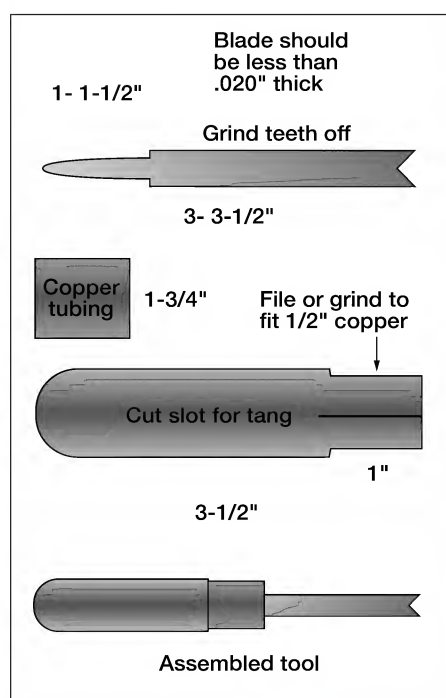


Illustration 2.

I originally made this to remove the clips on the new Master deadbolts. You have to loosen the screws slightly but you do not have to remove them. I found that the tool is handy for most clip removal chores on Kwikset, Schlage "F" series and others.

J. M. Cozby  
Texas

[Editor's Note: Jay sent me one of his tools. It's neat, simple, compact, and it works!]



STRATTEC RACING  
JACKET WINNER:  
**Altima Key  
Origination**

I think I've found the easiest way to originate the keys for a Nissan Altima. Release the trunk using the trunk lock release on the side of the driver's seat. Remove the lock retaining clip (which has a handy extension on it) and the entire assembly, including the decorative Nissan emblem, which pops right off the trunk lid. There isn't even any linkage to remove!

Once you have the assembly out, swing the emblem cover out of the way. You will see a black insert around the lock plug which just snaps in place. Use a small screwdriver to unsnap this insert.

Remove the "C" clip, tailpiece and spring from the cylinder and then remove the plug.

Use an uncut blank inserted in the plug to read the wafers and cut a new key by code. The entire process takes me about fifteen minutes.

Chuck Donnelly, CRL  
E-Mail



HPC PISTOL PICK  
WINNER:  
**Child Safety Switch  
Neutralization**

A friend called and asked if I could help him with a problem vehicle lockout. When I got to him, I found that the child safety locks on a 1994 Lincoln had been activated and with a damaged outside handle, the rear door could not be opened from the inside or outside. Being unable to see or feel any way to deactivate the safety switch through the top of the door cavity, we decided to remove the entire back seat of the vehicle.

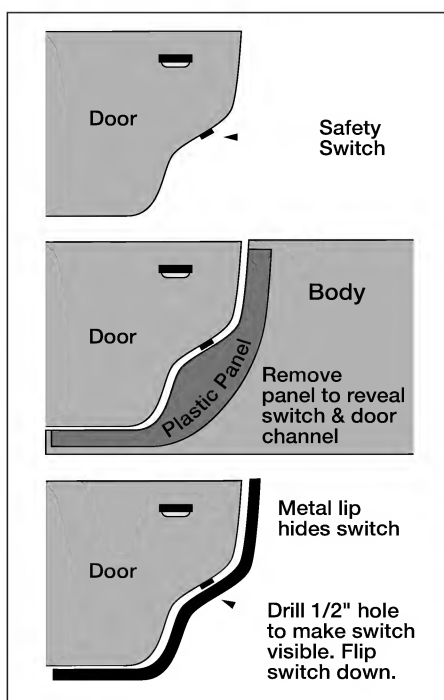
Illustration 3, shows the door, and the door's jamb, which has a plastic trim panel. We carefully removed the trim panel and found an insulated lip that stuck out about an inch. After carefully removing the weather stripping and getting down to bare metal, we

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**Illustration 3.**

measured the location of the child safety switch on the other door and transferred that measurement to the inoperative door.

At that point we drilled a half inch hole, looked through the hole and could see the switch and linkage. We used a probe to deactivate the switch and open the door. Jerry Eckhart  
Texas



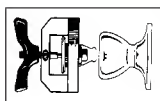
**SARGENT AND GREENLEAF WINNER:  
Security Screw Removal**

On a recent re-key, I went to the back door to re-key the "On-Off" switch that activates or deactivates the electromagnetic lock on the door. The switch was held in the box by security screws (a pin-style hex head) and I didn't have the proper tool to remove them.

I went back to my truck, found the proper sized Allen wrench, put it in the vise and very carefully drilled into the face of the Allen wrench. I didn't actually drill a hole into the wrench but made a sort of concave (bowl-shaped) depression in the end of the Allen wrench.

When I got back to the switch plate, I found that I was able to get just enough "bite" on the security screw to remove it, disassemble the lock and rekey it. I used the same tool to reassemble the switch.

Now I have a "security" type Allen wrench and a standard Allen wrench all in one. Jerry Dionisio  
Colorado



**A-1 SECURITY PRODUCTS WINNER:  
Supra Garage Door Opener**

Sometime ago, I built my own combination garage door opener. The hard part was mounting the internal parts in an attractive, weatherproof package. That's when I came up with the idea to mount a Supra key box with a secondary switch inside on the outside wall by the garage door. I drilled a hole through the back of the case and through the wall of the garage. To activate the garage door opener from inside the garage, there is already a simple momentary contact switch (doorbell type). Simply connect your outside switch in parallel with the first (i.e., install the second switch as if the first were not there).

To prevent someone from removing the box to get at the switch wires, go to the inside wall where the wires enter the garage and pull the switch wires through until there is no slack. Cut one wire and strip both ends. Solder the end of the wire that goes to the inside switch to one end of a paper clip. Wrap the other wire lightly (enough to maintain contact) around the other end of the paper clip. Insulate with tape.

If someone knocks the box off the wall, the wire that is wrapped around the paper clip will pull loose and break contact which will not allow the opener to operate.

Now the customer has a combination protected garage door opener and a place to store a spare key.

Tom Swirsky  
New Jersey



**ILCO KEY BLANKS (100)  
WINNER:**

**Quick Interchangeable Core Replacements**

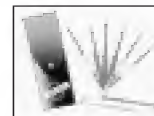
I do a fair amount of interchangeable core work and try to sell IC as replacements for single shear line locks whenever possible. Consequently, I try to keep various sized sets partially combined and ready to go. What I do is pre-key a number of IC cylinders for the first four chambers - even the control keys. If I sell a single core or a dozen, I can rapidly pin the two (or in the case of seven pins) three remaining chambers.

By pre-keying cylinders in this manner, I'm able to quickly respond to a customers need for one, two or ten cylinders after a quick evaluation of the job site. And, by pre-keying a number of cylinders, it is not difficult to generate

KD, KA or master keyed systems of various sizes.

To keep the keys that I generate for these systems from being easily duplicable, I use a Best/ Falcon keyway, since this keyway cannot be duped at Walmart or most hardware stores.

Steve Phillips, CPL  
Illinois



**PRO-LOK PK15  
PROFESSIONAL PICK  
SET WINNER:  
Key Blocker Removal**

On a recent call, I found that the building contractor had forgotten to take the plastic key blocker out of a Weiser lock set so that when the homeowner inserted their key, it would not go all the way in. He tried to force it and the block jammed up in the back of the keyway.

Because of the situation I was unable to pick the lock and I didn't want to drill it. So, using a spiral extractor and a small propane torch, I heated the end of the extractor, shoved it into the plastic key blocker and let it set for a moment and cool. Now all I had to do was pull the key blocker out of the keyway.

The homeowner, builder and I were all happy that I didn't have to drill the lock or replace it.

Michael L. Searl  
California



**TECH TRAIN TRAINING  
VIDEO WINNER:  
Strike Marking Tool**

If you're ever installing a knobset or deadbolt and drilled your cross bore and edge bore holes only to find that you have misplaced or forgotten your strike marking tool, I have an easy way for you to mark the strike.

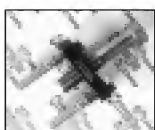
First, close the door. Then insert a pencil stub, pen or awl through the cross bore hole and into the edge bore hole. Angle the pencil, pen or awl so that the tip or point will scribe a mark along one side of the edge bore hole on the jamb. Open the door and where you see the half circle scribed on the jamb, place a quarter (a quarter is exactly one inch in diameter) into that half circle and use your pencil, etc. to completely draw the circle around the outside edge of the quarter.

Now, simply use your spade bit or hole saw to cut out the latch bolt hole which is perfectly centered.

Russ Eswick  
Kentucky



Continued from page 96



**SIEVEKING PRODUCTS  
GM E-Z WHEEL  
PULLER WINNER:  
Plastic Coated Tools**

We buy our picks without handles and use a product available at most hardware stores called DIP to put a handle on them. D.I.P. is a liquid plastic material that can be used to coat a number of tools, etc.

DIP is easy to use, but you can't be in a hurry when working with it. It takes two to four "dippings" to get the necessary build-up and the material has to cure between each coat. Before using DIP, I suggest you read the directions.

We use bright colors which aids in finding the pick or tension tool when it is dropped, especially in low-light conditions. Also, we cut down the tang on our tension wrenches so that we can use them at the top of the keyway. This positioning provides more even turning pressure as long as you are careful not to bind the first pin.

Howard Fulks  
Oregon

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PRODUCTS

WINNER:

**Key Machine Calibrator**

Before becoming a locksmith, I spent thirty years in the electronics industry

and after reading Bob Shearer's tip for a key machine calibrator in the April, 1998 Technitip Column, I thought I would send you my version. (See illustration 4.)

The following are the parts (less key blanks) you will need to construct a simple key machine calibrating device and should cost you about twenty bucks. All parts were acquired from Radio Shack.

- D1 Red Lead RS#276-086, \$2.49
- D2 Yellow Lead RS#276-205, \$2.99
- R1, R2, 330r Pack of five RS# 271-1113, \$0.49
- 1- Pack of Test Lead RS# 278-1156, \$3.99
- 1- 9V Battery Connector RS#270-325, \$1.39
- 1- Project Box RS# RS641907664, \$2.39
- 1- Pack of Terminal Strips RS# 276-688, \$1.29
- 1- Switch RS#275-612, \$2.89

First cover two key blanks with heat shrink tape as shown in the illustration and scrape off about a quarter inch of the heat shrink tape from the top of each blade where it will make contact with either the copy stylus or the cutter wheel.

Put the blanks in the vises and put the red lead on the bow of the guide key and the yellow lead on the bow of the

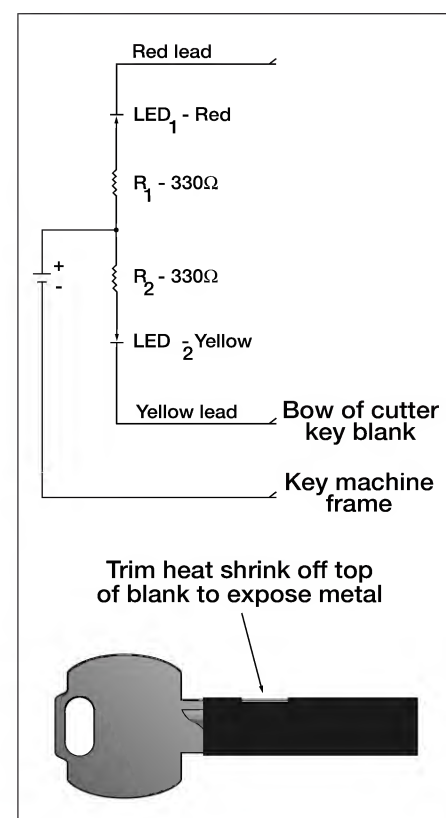


Illustration 4.



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cutter blank. Attach the black lead to the frame of the key machine and raise the carriage until the blank, or blanks, come into contact with the guide or cutter.

Ideally, both blanks should touch and both LEDs light at the same time. However, if you have color coded your wire leads to the LEDs, you can tell which way to adjust your machine. This will also allow you to determine high spots in your cutter wheel.



**Photograph A**

You can, if you desire, add an On/ Off switch, but as long as the leads do not touch, the LEDs will not light and run the battery down when the calibrator is in your toolbox.

Photograph A, shows what the finished calibrator looks like. You assemble the calibrator according to the wiring diagram in the illustration. Simply assemble two terminal strips in the bottom of the box for connecting the resistors and LEDs. Drill two holes in the top to bring the LEDs out and three holes in the side for each lead (Red, Yellow and Black). Be sure to tie a knot in each lead before bringing the lead through the hole. This will prevent the leads from pulling loose.

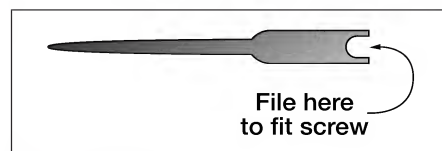
Rod Springfield  
Texas



**SLIDE LOCK'S "Z" TOOL  
OPENING SET WINNER:  
Pick Gun Needle  
Replacement**

Illustration 5, shows how to modify a diamond pick to repair a broken pick gun when no replacement parts are readily available.

Cut the handle off the pick about 3" back from the tip and file the top and bottom of the blunt end to fit into the pick gun. Then file a slot (or, if you



**Illustration 5.**

prefer, drill a hole) so the screw of the pick gun will slip into the new tip and be able to tighten the "jaws" together to hold the new pick.

The entire process takes about five minutes.

Jim Elkins  
Kuwait



**THE SIEVEKING AUTO  
KEY GUIDE WINNER:  
Presto Lock Opening**

I had a customer with a locked suitcase which had Presto Locks on it and needed it opened.

After looking the situation over, I tried inserting a Star 6BE1 blank in the keyway. Surprisingly, the blank entered the keyway. I cut the blank down as you can see in Illustration 6, and impressed a new key for the customer.

The whole process was quick and the customer was "impressed" too!

Dan Stacey  
New York



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Best blank cut  
down & impressed

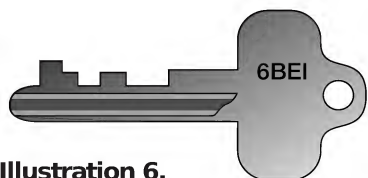
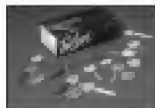


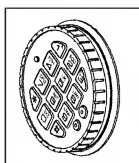
Illustration 6.



JET KEY BLANKS (50)  
WINNER:  
**Pivot Pin  
Replacement**

The pivot pin in the Adams Rite cam was missing and I had to put the 1850 M S lock with a paddle handle back into service immediately. Illustration 7, shows the pins location. Not having a new cam handy, I threaded a 1/2" x 6-32 flat head machine screw into the pivot pin hole. This made an excellent temporary repair until a new cam could be ordered and installed.

Larry Johnson  
Wisconsin



LA GARD WINNER  
**Schlage Control Key  
Substitution**

When called upon to service Schlage interchangeable core locks with no control key available,

Cam Plug

Pivot Pin

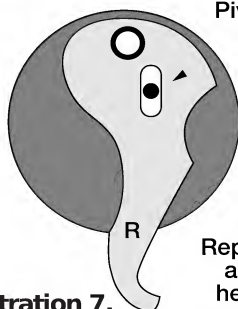


Illustration 7.

Replaced with  
a 6-32 flat  
head screw

here's a way to quickly make a key using a six pin blank.

You need a working key to copy and the master key is the best choice. Insert the master in the copy machine of your duplicator and either use a micrometer or spacer to hold the shoulder of the working key .040 back from the shoulder guide of the machine.

Index the copy key as usual (don't hold it back from the shoulder guide) and cut. The cutter will cut off the shoulder of the copy key and the cuts will be properly spaced. Just be careful not to cut any further than the last cut on the copy key. If you do, you will ruin the new control key by cutting into the ramp.

Finally, cut the bottom shoulder of the blank back at a 45° angle and your new control key should work like a dream.

Tom Taylor, CPL  
E-Mail



HIGH TECH  
TOOLS WINNER:  
**Key Blank  
Dogging Device**

The dogging device on a Kawneer Panel Line Exit Device (the kind that is built right into the narrow style glass door) broke and the customer needed to be able to dog the unit open during business hours until a replacement part could be ordered.

As a quick fix, I used a TEC screw to attach a seven pin key blank to the aluminum panel next to the push panel. To "dog" the unit open, I simply pushed the exit device in, flipped the "Key Operated" dogging device over the end of the push bar, and released the push bar.

There was enough "back pressure" from the push bar to "wedge" the Key Operated dogging device in place thereby dogging the unit in the open position. This worked until permanent repairs could be made.

Jay Christie  
North Carolina

TRN



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# The **WALTER** Side

One World, Slightly Used



by  
**Sara  
Probasco**

**W**e've all heard the phrase, "There's nothing new under the sun," but whoever came up with that "truism" obviously wasn't at a certain salvage company in Uvalde, Texas, when a large flatbed truck wheeled onto the property. Kicking up dirt and gravel, it cautiously turned into the narrow drive and sighed to a stop.

Don was working on a front door lock on the office building, at the time, and casually glanced up at the sound of hydraulic brakes. Then he did a double-take, his mouth dropping open in amazement.

There on the truck, securely cushioned and guyed down with cables to prevent movement, rested an enormous globe of the world. Still gaping, Don looked up ...and up. The globe, itself, was some twenty-five feet in diameter, and it was mounted on a five-foot-high base, bringing the overall height to about twice that of the office building. The signs labeling it as an "Oversize Load" were putting it mildly.

"Where you want it?" the truck driver nonchalantly called to Don.

"Beats me," Don replied vaguely, still having trouble believing what he was seeing.

The salvage company's owner, stepped from the office and began giving the trucker directions as to where to park. Then he went back inside to arrange for a means of safely transferring the globe from the truck to the ground.

"We sure don't want this thing getting away from us," he said into the telephone. "All I need is a twenty-five foot metal ball rolling off down the highway. ...No, I have no idea what it weighs. ...Well, what am I supposed to do, put it on my bathroom scale?"

It took the rest of the day, but the proper equipment and men to do the job were finally located, so by nightfall the huge world globe was sitting proudly on its base, dwarfing the office building of the salvage company and grabbing the attention of passers-by.

"Where in the world did you find it?" Don asked him.

"Aw, I picked it up at an auction," the owner replied.

Originally outside the Johnson Space Center, when that facility underwent massive remodeling it was decided that the old globe had to go in favor of more modern decor. Along with other replaced furnishings and decor, the globe and its base had been auctioned off to the highest bidder. The bid price was seven thousand dollars — a bargain, compared to its original cost.

Following the sale, the proud new owner rented a truck, loaded his prize, and drove it off, down the road. Then tragedy struck. A highway collision resulted in the death of the owner and demolition of the truck. However, the globe remained unscathed. Due to mitigating circumstances surrounding the collision, the globe ended up in a police auction.

The salvage company owner got wind of the situation and always looking for the unusual, decided it would make an interesting addition to his salvage yard, whether he ever sold it, or not. He had little competition in bidding (After all, what is the average person going to do with a twenty-five foot globe of the world?), so he managed to get it for a paltry five hundred dollars.

Several months later, the man was in our store getting some keys made.

"What ever happened to that huge world globe?" Don asked. "I didn't see it when I was by your place the other day." Don chuckled as he buffed the keys. "Somebody steal it one night?"

"I was the one who stole it," the man answered.

"Funniest thing, a lady came by a couple weeks ago, wanted to know if it was for sale. "Sure," I told her. "Everything I have is for sale at one price or another." I was about to quote her a price, when she told me not to be inflating the price on her, that she knew what it had originally cost the space center, but she had been at their auction and knew what it went for there, too. In fact, she said she was the runner-up bidder at five thousand dollars. She asked, would I take that for it now? "

The woman had learned of the previous owner's fatal collision and had been trying to track down the fate of the globe ever since, finally learning of the purchase and subsequent moving of the globe to Uvalde.

"And you had bought it for only five hundred dollars? What did you tell her?" Don asked.

"Oh, I said I was afraid I'd have to have more than five thousand for it. After all, I had the expense of moving it,





getting it set up, and all that. It's no small thing, moving a twenty-five foot globe around, you know. Besides, I'd gotten sort of attached to it. I was figuring on keeping it, using it as an attention-getter around the yard, leaving it to my grandkids, some day. Where else you gonna see something like it?"

"Yeah, yeah. You can cut the sad-story sales pitch," Don chided. "So, what did she say?"

"She offered me fifty-five hundred, said that was her best offer, take it or leave it. She was real determined about it."

"...And?"

"I took it, of course. I've learned a couple things in my life. One of them is, there are only two ways to argue with a determined woman, and neither one works. Besides, any time I can get that kind of mark-up, I figure the day hasn't been a total loss."

"But what about the attention-getter, your grandkids, all that?"

"Something else will come along. Always does. That's what I love about this business." He thought for a moment, then added, "In fact, just the other day somebody was telling me about a tug boat with wheels on it some guy has for sale, over 'round San Angelo. They say it's good on the road or in the water. Think I'll see what he wants for it. It's nice to have one-of-a-kind stuff sitting around the yard. Keeps folks coming by."

"What do you suppose the woman wanted with that globe?" I asked Don when he told me about it.

"There is absolutely no telling."

"Maybe her husband was an astronaut, or maybe somebody in her family originally designed it, "I suggested.

"Maybe she has a big bald spot in her backyard, like we do, and she's been looking for something to put there so she won't have to plant more grass."

We were never able to discover who the lady was, where she lived, or what she did with the globe. I like to think it's perched atop a shop, somewhere, enticing the curious inside or sitting regally in a landscaped area beside the entrance to an impressive office building, catching admiring glances of passers-by.

At any rate, I doubt you'll find it at a second-time-around shop. After all, that old world has already been around, and around, and ... **TRU**



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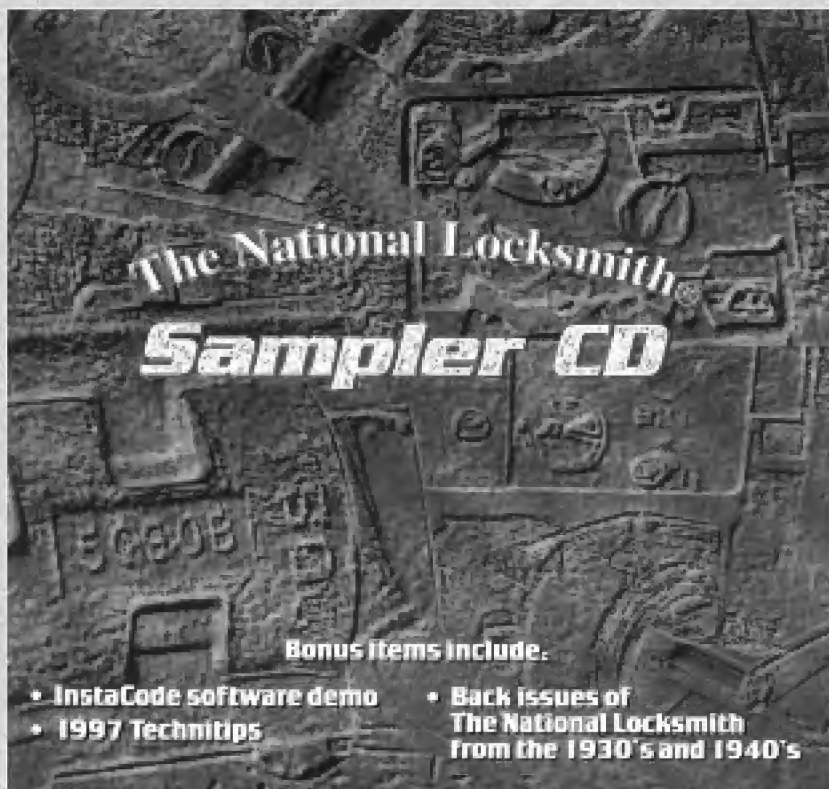
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**A Monthly Review of  
Technical Manuals**

# The National Locksmith Sampler CD



**T**he Sampler CD, which is the latest software product released by The National Locksmith, contains hundreds of pages of interesting and valuable information. The contents are broken down into four categories which include: Product Catalog, INSTA-CODE Demo, 1997 Technitips, and TNL: 1930's-1940's.

The complete Product Catalog is broken down into nine different categories: General Locksmithing, Automotive Service Manuals, Safe Opening Manuals, Lock Service Manuals, Auto & Safe Associations, Codes and Software, The National Locksmith Magazine, New Products and an Order Form that can be printed and sent in.

After selecting a category and clicking on a specific book, you will be given some basic information: A photograph of the cover, author, price and a summary of the book. By clicking on the cover you can instantly view 10 sample pages that will give you drill points, transponder programming information, automotive lock techniques and much more. You even have the ability to zoom in on the page, thereby allowing you to view the photographs and text in full detail.

The second category, INSTA-CODE Demo, gives you the opportunity to see the newest code program available. After downloading the program you will be able to experience first hand the many features offered by this code program. On-screen instructions will walk you through the installation, and the full INSTA-CODE Manual is included. The demo works with Windows 95/ NT and Windows 3.0/ 3.1.

The full year of 1997 Technitips containing valuable tips and tricks has also been added onto the CD. The tips are key word searchable, thus enabling you to find a tip on any subject you wish instantly.

Finally, as a special collector's item, 12 complete issues of The National Locksmith dating from 1935-1945 are included. From cover to cover, you will be able to see the changes that have taken place in the locksmithing field in the last 65 years. The articles and the advertisements make for fascinating reading.

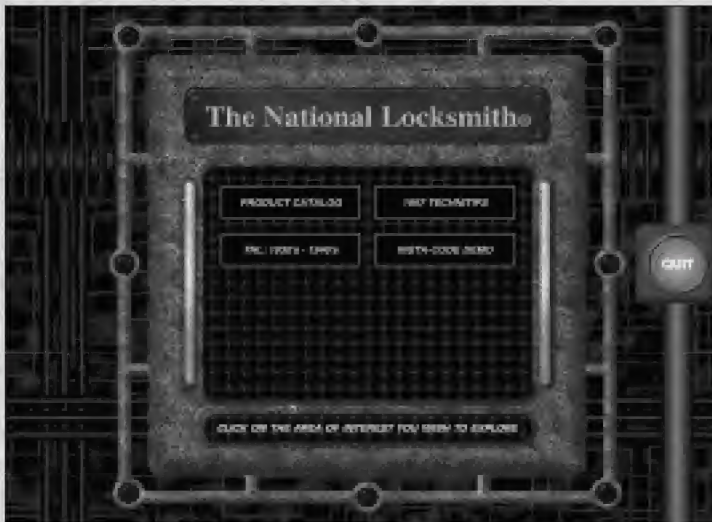
The price of the Sampler CD is \$9.99 plus \$5.00 shipping and handling. For more information call or write:

The National Locksmith, 1533 Burgundy Parkway,  
Streamwood, IL, 60107, Phone: 630-837-2044, Fax: 630-837-1210.

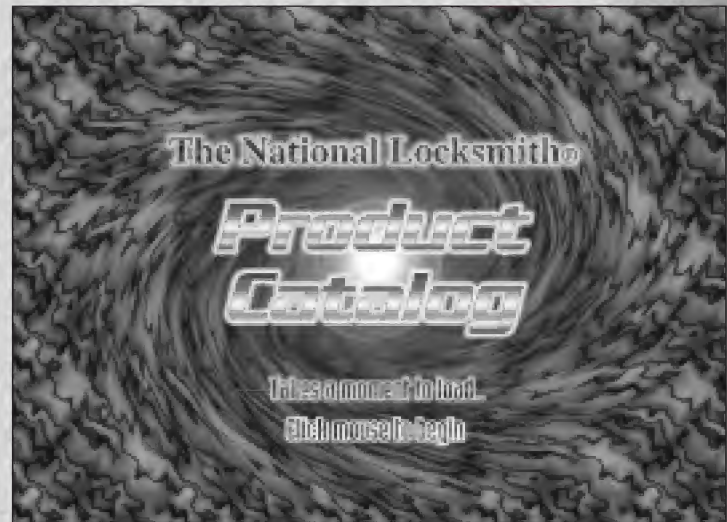


## The Bookmark

Samples: The National Locksmith Sampler CD



Buttons for the Product Catalog, magazine pages from the 1930's and 1940's, T echnitips and the Insta Code Demo.



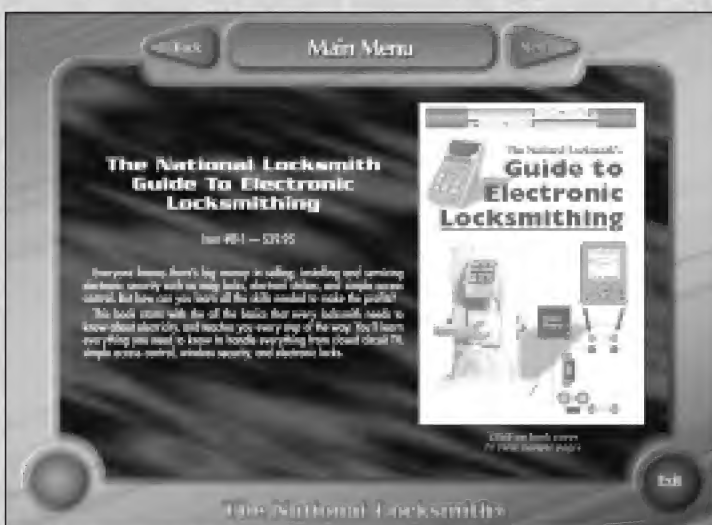
The Product Catalog opening screen.



Buttons let you view any category of book in the Product Catalog.



View the selections in any category.



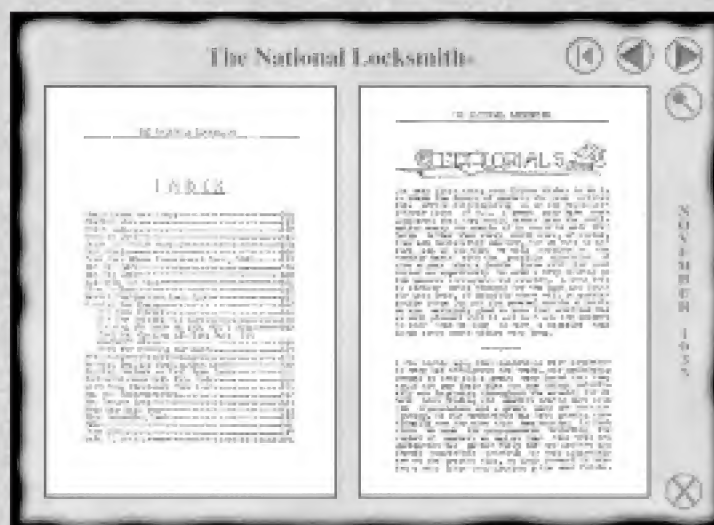
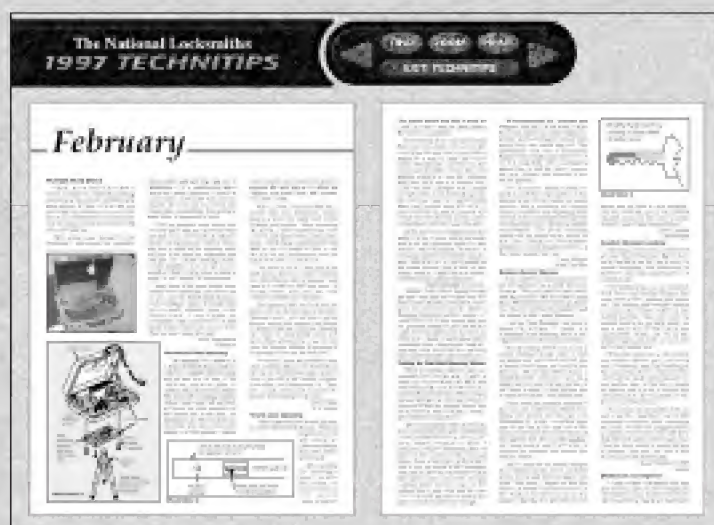
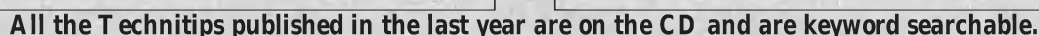
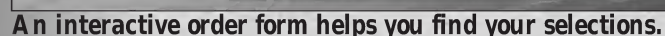
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## The Bookmark





I was looking out the shop's front window facing Main Street not wanting to face the day. It had been years (like about twenty) since I had taken a real vacation. All of those years working as hard as possible and today it hit me. I was worn out! I wanted the pleasure of not picking up a tool and not listening to a hardship or complaint. I vowed that very moment I would start taking vacations, I just didn't have the time nor the money set aside to do it now.

was burned out and had no idea what I was doing. Getting in my car, I drove home where my astonished family simply stood there with their mouths open as I told them what I had done. It was on the way home that I decided to invent my "One Day Vacation."

Going past the family, I went directly to the telephone and unplugged it from the wall jack, giving instructions as I went. "I know you can't believe what is happening right now, but I can't take another day of

dollars? I really do need to get a hair cut!" I handed him a twenty and told him to get lost and I would see him tonight. I handled the rest of the family in the same manner and they all took off for the mall and other points unknown. I was alone enjoying the warm water of my shower. It was wonderful!

The shower was finished, the house was empty, and it was time for a great breakfast. Driving to the pancake house was pleasant, as I thought of how I had abused myself



by Don B. Dennis, CPL

It was seven o'clock in the morning and I picked up the receiver of the telephone. "I have decided to take today off," I said to the lady on the other end. "You ladies handle the calls as best you can and I'll come by tomorrow morning and pick them up."

The business was in the hands of the answering service and I really didn't care what they told the people. I

work. Not today. Under no circumstances is this phone cord to find its way back into that plug! I'm taking the day off and will not be disturbed by anyone!" I declared.

I turned off my pager and tossed it into the kitchen sink and proceeded upstairs to take a shower. My son poked his head around the corner and asked "Is this not a good time to ask for a few

over the years. All of those parking lot car openings in the foulest of weather and the busted hands. Not to mention all of the other aches and pains in the knees, ankles, elbows and back from all of the long hard hours of safe drilling. Everything had taken its toll. The eighteen hour days and lack of healthy meals meant only that my body was a wreck. My mind was probably not far behind!



No doubt about it. Vacations are a must! Not the running off to some class and trade show type of vacation. That would be work related and I never seem to take the time to relax on events like that. I was considering how all of this was nothing more than a circus of madness.

Over one of those break-fasts that had everything, I decided to treat myself to a massage at a local spa. My goodness, it was great! First a steam bath and shower followed by a massage. My body was relaxed and I was a happy person! I returned home with a smile on my face. The dog took note and ran off to the corner of the yard. That dog wasn't too smart to start with.

I then found the "old" hammock that I had never set up. I had received it for Christmas five years ago and was surprised it hadn't rotted. The dog with his tail between his legs, gingerly came to rest beneath the hammock. I eased into it, under the shady maple tree, enjoying a pitcher

of margaritas for the rest of the afternoon. I did little else that day.

The next day I felt a bit hung over, but I felt good about the "one day vacation." It taught me of the importance of balancing one's life.

Work is important. Money is important. Friend's are important. Family is important. Customers are important. I am important! I had forgotten the "I."

I did not feel guilty for taking only one day off. I had not broken the budget to do it. I did not have a backlog of work waiting upon my return. There were no airline tickets to pay for. No in-laws to get mad at. No wasted time and stress over trying to create "bonding time" or "quality time" with the family. Just one beautiful day to spoil myself and to be selfish. I didn't even have time to worry about lurking disasters or what customer was going to create mischief for me the next day.

Everyone is different and what I may do someone else will be bored with. It is a matter of doing what suits your fancy. It is your vacation.

Since that first experience, my one day vacations are well planned and I have great fun making them work for me. Not that they're really structured. We all have lists that we keep. There are shopping lists, grocery lists, job lists, a garden or flower planting lists, and so many other lists that it is impossible to list all of the lists. At my desk, I have a list of things I may want to do on the next one day vacation. If the list gets too long, it means my one day is long overdue. Maybe I'll take two days to catch up.

Don't you just love it! Take an extra day off to catch up on goof off time. Wow! What a great way to keep your perspective of the world. Life is too short so don't forget to enjoy it! Take a day and smell the roses!

TNL



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# Road Rally

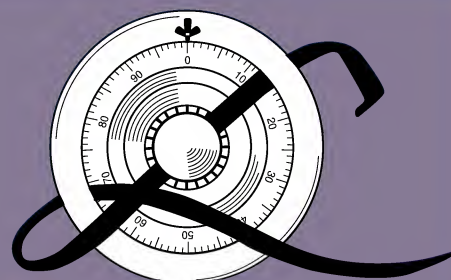
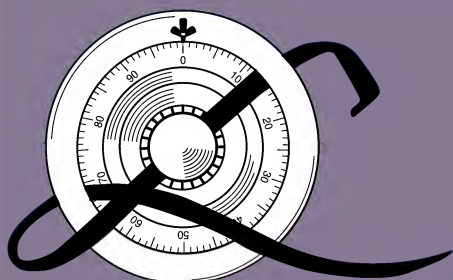
A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:  
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.

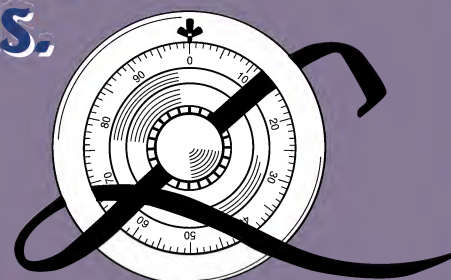
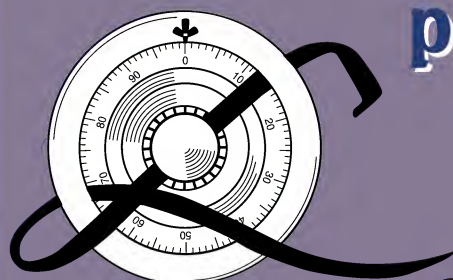


Owner: Allen's Locksmith Service,  
Raleigh, NC

Model: 1995 Chevy G20



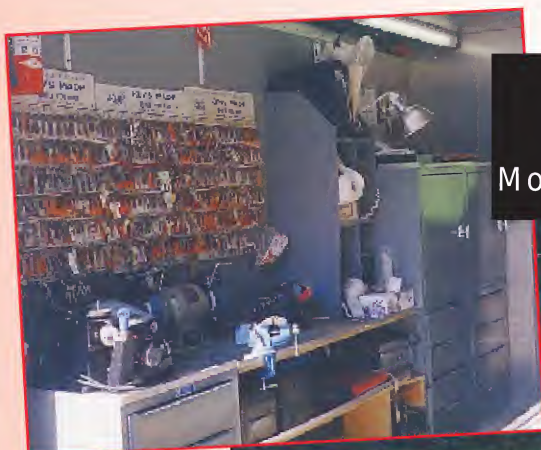
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## Road Rally



Owner: Louis Rivet,  
Claremont, NH  
Model: 1993 Aeromate Van



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# Quick Entry

## UPDATE

by  
Steve  
Young



### 1998 Mercedes M Series

The Mercedes ML-320 was introduced mid-year in 1997. This is the first Sport-Utility vehicle built by Mercedes to be sold in the USA. (See photograph 1.) The ML-430 will go on sale late in 1998. The ML-320 and ML-430 are virtually identical as far as the bodies are concerned. The real differences between the two vehicles are the engine and drive train choices as well as many interior differences.

Both vehicles are equipped with side-impact airbags that are mounted inside of the front doors. However, all of the wiring, the airbag itself and all other components of the airbag system that are inside of the door are very well protected. A sheet-metal guard is placed above the airbag mechanism and should prevent the possibility of damaging the airbag system with a car opening tool.

Both of the doors are equipped with four-track high-security "sidewinder" style locks. When the vehicle is shipped from the factory, a plastic plug comes inserted into the keyway of each lock. The owners are encouraged to use the wireless remote transmitters to lock and unlock the doors. Apparently Mercedes wants these exterior locks used only as a back-up for the remote system in case of a failure or a dead battery. For this reason, the owner may not even be aware that the vehicle is equipped with exterior locks at all.

All four doors are equipped with vertical inside lock buttons. The vertical linkage rods on the front doors are unshielded and can be easily attacked with the TT-1017 tool. (See illustration A.) Because of the shielding around the airbag system there should be no problem at all using this tool to unlock the vehicle. However, avoid any unnecessary probing within the door.

To unlock the vehicle, begin by wedging open the door just forward of the inside lock control button. (See photograph 2.) Carefully insert the tip of the tool so that you can grasp the linkage rod from the outboard side of the door. Once the shaft of the tool is in contact with the weather-stripping, rotate the tool so that the hooked



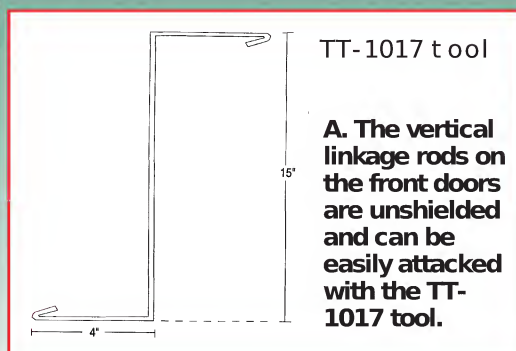
1. The Mercedes ML-320 was introduced mid-year in 1997.



2. To unlock the vehicle, begin by wedging open the door just forward of the inside lock control button.



3. Carefully insert the tip of the tool so that you can grasp the linkage rod from the outboard side of the door.



TT-1017 tool

**A. The vertical linkage rods on the front doors are unshielded and can be easily attacked with the TT-1017 tool.**

#### Quick Reference Guide

##### Vehicle:

1998 Mercedes ML-320 and ML-430

##### Direction Of Turn:

Clockwise (Passenger Side)

##### Tool: TT-1017

##### Lock System:

Four-Track High Security plus Transponder

end is below the glass and to the rear of the inside lock control linkage.

Hook the vertical linkage rod by twisting the tool toward the inside of the vehicle and pulling forward on the tool at the same time. Watch the inside lock button for movement as you probe for the linkage rod. Once the tool has hooked onto the linkage rod, pull forward and upward at the same time in order

to unlock the vehicle. (See photograph 3.)

Always use care while inserting and removing any car opening tool. Careless use of the TT-1017 tool can break the window glass. Be particularly careful that the hooked end of the tool is not wedged against the glass, and make sure that it does not become hooked onto the lower edge of the glass. **TNL**



# IC

# Lock Introduction

by Gerry Finch

**T**his installment of the series will explain how to determine the pins to put into the interchangeable cores.

## The A-2 Keying System

The following information pertains to the A-2 system, the main focus of this article. The A-2 system is a 10 step system with increments of .0125".

## Bottom Pins

0 - .110, 1 - .122, 2 - .135, 3 - .147, 4 - .160, 5 - .172, 6 - .185, 7 - .197, 8 - .21, 9 - .222

## Wafers

Master, Control and Top Pins

2 - .025	8 - .100	14 - .175
3 - .037	9 - .112	15 - .187
4 - .050	10 - .125	16 - .200
5 - .062	11 - .137	17 - .212
6 - .075	12 - .150	18 - .225
7 - .087	13 - .162	19 - .237

Pinning Interchangeable Core Cylinders is very different than pinning standard pin tumbler cylinders. Considerably more pins are used in the pinning process. Ten lengths of bottom pins and eighteen different wafers are used in the A-2 system. From these eighteen wafers, the master pins, control pins and top pins are selected. Only ten of these wafers can be used as top pins. They are numbers four through thirteen.

## Controlling The Pin Stack Length

Absolute control of the total length of all pin stacks in a chamber is a must. Sufficient room must remain in each chamber after the insertion of all

the pins so the springs when they are compressed are not crushed and equal compression is applied by each spring to each stack of pins. To accomplish this the exact length of a stack of pins in any chamber has been determined. The exact length each stack of pins must equal is .397".

Pinned properly, each stack will equal .397" thousandths of an inch. (See illustration 1.)

Making up a pinning chart or laying out a master key system using decimal fractions such as shown in illustration 1, would be entirely too clumsy so we use the coded number assigned to each pin to control the length of each pin stack. When converted to code numbers .397" equals 23. The total of the coded numbers of all pins in a stack must equal 23 regardless of the number of pins in a stack.

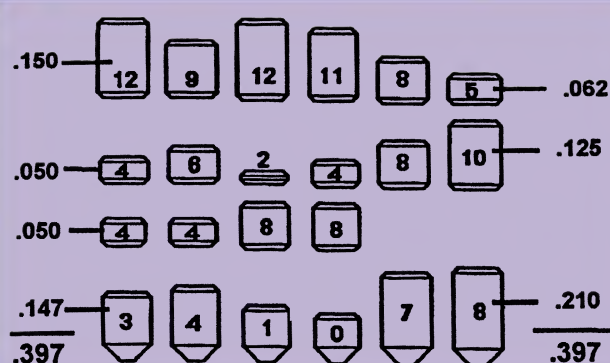
## Determining the Pinning of the Core

To pin up the core you must know the bitting of the control key, top master key and the change key. This information can be obtained from the bitting list for the system. If you are determining the bitting from keys, you can use a key gauge to determine the cut depth. These gauges

## Part 4 – Servicing Interchangeable Cores: Arrow-Best-Falcon

are available from most of the manufacturers of cores as well as from outside sources.

A-1 Security manufactures a gauge that has the A2, A3, and A4 all on the same gauge. If you don't have a key



**1. When pinned properly, each stack will equal .397" thousandths of an inch.**



gauge, measure the depth of cuts with a micrometer or dial calipers and convert the measurement you get to the coded number of the cut by comparing the decimal fraction measurement to the coded number of the cut shown in illustration 2. As we stated in the previous article, determining the pins to put into the core and creating master key systems must be done using the coded numbers of the pins and cuts.

Determining the pins to put into the core can be done in several different ways. I have found that for persons who do only a few cores a week, or a month, remembering the rules to determine the pins can be very difficult. For those

### A2 SYSTEM DEPTH OF CUT

0	=	.318
1	=	.306
2	=	.293
3	=	.281
4	=	.268
5	=	.256
6	=	.243
7	=	.231
8	=	.218
9	=	.206

**2. Comparing the decimal fraction measurement to the coded number of the cut.**

who work with them each day it becomes quite easy and it is possible to do all the figuring mentally.

To give those who pin cores only occasionally the opportunity to work with the same accuracy as the latter type of individual, years ago I created the Pinning Chart shown in illustration 3, and recently updated it. This chart does not require that the rules of pinning be memorized. Just follow the direction given on the chart and you

can't go wrong. It doesn't require any advanced mathematics either, only very simple addition and subtraction. This chart also will provide a record you can keep and use if you should ever need to rekey the core again.

**C**omplete each section, A through C, transferring your bottom pins, control pins and top pins to section D as instructed. If you have followed and completed the instructions as instructed when you add the columns in section D each should total 23. If they do not, go back over each step checking all your figures. Each column (pin stack) must equal 23. I have found that most of the mistakes made are in the transfer of figures from one section to another or mistakes in addition or subtraction.

I also created a slide chart for pinning the A2 system. This can be carried to the job site and does not require you to write out your pinning unless you wish to keep a record. It is currently sold by LAB and NT Falcon. The chart is shown in illustration 4.

The slide chart will show you the pins for a master keyed system and also non-master keyed systems. It gives you the pin stack for one chamber at a time. The slide must be reset for each chamber. It is very easy to use. Again you will need to know the bittings of the control key, top master key and the change key. We will use the following example to explain the use of the chart.

Let's assume that our 3 bittings in the first chamber are as follows, the control key is a 4, the top master key is a 7 and the change key is a 5. Note that the chart is two sided.

### A2 INTERCHANGEABLE CORE PINNING CHART

	1	2	3	4	5	6	7
<b>A</b>							
1. Write TOP MASTER bitting							
2. Write CHANGE KEY bitting							
3. Select BOTTOM Pin							
4. Select MASTER Pin							
5. Record BOTTOM and MASTER Pins at D1 and D2							

	1	2	3	4	5	6	7
<b>B</b>							
1. Write CONTROL Key Bitting							
2. Add (+) 10 to Control Key	10	10	10	10	10	10	10
3. This is the CONTROL Number							
4. Add A3 & A4 and Write here							
5. Subtract B4 from B3. These are the CONTROL PINS.							
6. Record CONTROL PINS at D3							

	1	2	3	4	5	6	7
<b>C</b>							
1. Total Allowable Pins	23	23	23	23	23	23	23
2. Write Control Number from B3							
3. Subtract C2 from C1. These are the TOP PINS.							
4. Add A3 & A4 and Write here							

	1	2	3	4	5	6	7
<b>D</b>							
1. BOTTOM PINS							
2. MASTER PINS							
3. CONTROL PINS							
4. TOP PINS							
5. Sum of D1, D2, D3 & D4 should equal 23. VERIFY	23	23	23	23	23	23	23

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**3. This chart does not require that the rules of pinning be memorized.**

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4. This chart can be carried to the job site and does not require you to write out your pinning.

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FAX: 203-569-7838

**LAB**

Control Key	0	1	2	3	4	5	6	7	8	9	Top Master Key	5-8 This Side 9-4 Other Side
Top Master Key	7											

CHANGE KEY	0	1	2	3	4	TYPE OF PIN
	5	6	7	8	9	
	0	1	2	3	4	
	5	6	7	8	9	

**INSTRUCTIONS**  
**MASTER KEYED SYSTEMS AND NON-MASTER KEYED SYSTEMS**  
This slide chart can be used to determine pinning for both Master Keyed and Non-Master Keyed Interchangeable Core Cylinders. The chart displays pin stacks for one pin chamber at a time.

**MASTER KEYED SYSTEMS**  
1. Select master key bitting number under control key bitting number on proper side of slide.  
2. Locate change key bitting number in vertical column, proceed pinning for this chamber with pin shown to the right of the change key bitting.

**NON-MASTER KEYED SYSTEMS**  
1. When system is not master keyed, use the change key bitting number for the master key and change key. Set this change key bitting number under the control key bitting number.  
2. Locate change key bitting number in vertical column, proceed pinning for chamber with pin shown to the right of this bitting number.

**IMPORTANT:**  
Only use **LAB** Original Nickel Silver or Color Coated Interchangeable Core Pins and Pin Kits For Ease and Accuracy. Available only at the Finest Lock Wholesaler Distributors.

5. At the top of the chart there is a section that lists all the possible control key bittings.

Control Key	0	1	2	3	4	5	6	7	8	9	Top Master Key	5-8 This Side 9-4 Other Side
Top Master Key	7											

CHANGE KEY	0	1	2	3	4	TYPE OF PIN
	5	6	7	8	9	
	0	1	2	3	4	
	5	6	7	8	9	

Illustration 5, is an enlarged view of the center portion of the chart. At the top of the chart there is a section that lists all the possible control key bittings. Under it is a place to set the proper number for the systems top master key. Note that it reads "Top Master Key 5 - 9 This side, 0 - 4 other side", so we use this side to determine the pinning for our core. Had our master key bitting been any number from 0 to 4 we would use the other side of the chart.

**W**e have moved the slide so that the number 7, the bitting of the master key in the first chamber is under the number 4 which is the bitting of the control key. Next locate the change key bitting, a 5 in the vertical column below the control and master key.

The proper pins to place in this chamber will be located directly to the right of this bitting. In this example they are a 5 bottom pin, a 2 master pin, a 7 control pin and a 9 top pin for a total stack height of 23. Couldn't be simpler. Again there are no rules to remember. Let's do one more example.

For the second chamber our control key is a 9, the master is a 4 and the change key an 8. Looking at illustration 6, and using the same technique we used above, we see that our pins are a 4 bottom pin, a 4 master pin, a 11 control pin and a 4 top pin for a total stack height of 23.

#### Determining the Pins Mentally

I believe that anyone who is called upon to pin a core, regardless

of his or her experience or whether he pins 20 cores a day or one core a year, should have a method which enables him to do a fast, accurate and professional job. The methods I have shown you up to this point will make this possible.

For the individual who pins cores everyday and does not want to bother using some pinning aid, there is a method of determining the proper pinning in your head without the use of pencil or paper. If you have difficulty remembering rules and facts about a system, this method probably isn't for you. It's worth a try however.

First there are some facts you must be thoroughly acquainted with

**Continued on page 132**



Continued from page 130

and have committed to memory. They are as follows:

1. When selecting the bottom pin, select the bitting from the master or change key that is the smallest number.

2. When selecting the master pin add enough to the number you chose for the bottom pin to create the number of the highest bitting (largest number) between the master and change key. (See illustration 7.)

<b>MASTER KEY</b>	<b>7</b>
<b>CHANGE KEY</b>	<b>5</b>
<b>Bottom Pin</b>	<b>5</b>
<b>Master Pin</b>	<b>2</b>

**7. When selecting the master pin add enough to the number you chose for the bottom pin to create the number of the highest bitting between the master and change key.**

3. To determine the control pin a number called the control number is used. This control number is obtained by adding 10 to the control key bitting. Thus if 3 is the control key bitting, our control number for this chamber is 13. (3+10).

4. To determine the top pin the number for a proper stack length must be known. The number for the A-1 system is 23.

Remember you are pinning one (1) chamber at a time. Here are the mental calculations you must perform:

1. Determine the bottom and master pins. Remember the bottom pins are the smallest number and can be from either the master key or change key. Next, to arrive at the master pin, add enough to the bottom pin number to create the larger number between the master and change key. Hold the answers mentally.

2. Now convert the control key bitting to the control number by adding ten (10) to it.

3. Now select the largest of the two numbers between the master and change key and subtract it from

the control number. The result of your subtraction is the control pin.

4. Subtract the control number from the number 23. The product of this will be the top pin to load into the core.

Now let's go through the exercise using our mind and memory only. Remember we are doing only one chamber at a time.

A. First we see or are told that the bitting of the master key is a 7 and the change key is a 5. We choose 5 as our bottom pin and 2 as the master pin.

B. Next we are informed that the control key bitting is a 3. We mentally add 10 to it and remember that 13 is our control number.

C. Next we select the largest number from the master or change key. The largest number is from the master key and is a 7. We subtract this number from the control number which is 13 and our answer is 6. A number 6 wafer is our control pin.

D. The last step is to subtract the control number 13 from 23. Our answer is 10. A number 10 wafer is our top pin.

E. Add your numbers 5 (bottom pin), 2 (master pin), 6 (control pin), and 10 (top pin). If your answer is 23 you have chosen correctly.

This is really a simple fast and efficient way to determine the pinning of a core once you have become proficient in pinning the cores. If you have committed the necessary facts to memory this procedure is not nearly as difficult as it would appear. However, if you dislike memorizing facts, the other methods and charts that we have discussed are for you.

### Keeping Pinning Records For a System

Illustration 8, shows a key bitting array (K.B.A.) for an I.C. master key system. Every bitting in the system is shown in the array, including the control key. Just as every possible proper bitting is shown in the K.B.A. the pinning for each of these bittings can be recorded and shown on a single page.

**K**eeping adequate and accurate records of the systems you are servicing and maintaining is an absolute must. It can also be a very time consuming task and can generate mounds of paper work if not handled properly. Shown in illustration 9, is a chart that will save you time and help to minimize the number of records you maintain.

One of the first things we learn when we create pinning charts is that it is only necessary to list the top master key and the change key. It is unnecessary to list the master keys of the various levels below the top master key. The bittings for these keys will be included in the top master and the individual change key and shown as the master key and change key constants in a properly created system.

To use the chart it is only necessary to fill in the proper pins as shown in illustration 10. You can obtain these pinnings by using your slide chart or the chart shown in illustration 2.

Look at the first column of the chart. We have written the bittings 5, 7, 9 and 1. These are the only possible change key bittings under the top master key in that chamber. Check the K.B.A. (illustration 8) and you will see the connection. Check the remaining columns and you will see that they are also the same as the corresponding column in the K.B.A.

Depending on the level and size of the system that was created using this K.B.A. there are theoretically 4,096 possible different pinnings possible. However this will all depend on the way the master key was selected. We will not go into master keying here. You should understand

Continued on page 134

		KEY BITTING ARRAY					
CONTROL KEY	G M K	6	9	4	1	4	1
		3	8	5	0	7	4
		5	0	7	2	9	6
		7	2	9	4	1	8
		9	4	1	6	3	0
		1	6	3	8	5	2

**8. A key bitting array (K.B.A.) for an I.C. master key system.**



Continued from page 132

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Job Name: \_\_\_\_\_ Location: \_\_\_\_\_

CONTROL KEY : \_\_\_\_\_

MASTER KEY : \_\_\_\_\_

**PIN CHAMBERS**

	1	2	3	4	5	6	7
CHANGE KEY BITTINGS	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.
	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.
	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.

B.P. = Bottom Pin M.P. = Master Pin C.P. = Control Pin T.P. = Top Pin

Form designed by: G.I. "Gerry" FINCH

**9. This is a chart that will save you time and help to minimize the number of records you maintain.**

Job Name: DEPT. OF ENERGY Location: WASTELANDS, NV.

CONTROL KEY : 6 9 4 1 4 1

MASTER KEY : 3 8 5 0 7 4

**PIN CHAMBERS**

	1	2	3	4	5	6	7
CHANGE KEY BITTINGS	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.
	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.
	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.	B.P.
	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.	M.P.
	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.	C.P.
	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.	T.P.

B.P. = Bottom Pin M.P. = Master Pin C.P. = Control Pin T.P. = Top Pin

Form designed by: G.I. "Gerry" FINCH

**10. To use the chart it is only necessary to fill in the proper pins.**

master keying well before attempting to key and service I. Cores.

The chart shown in illustration 10, is the pinning for an entire system. The control key and grand master key are shown above the chart. You need only determine the change key bitting for the core you desire to pin up and then select the proper pins shown next to them.

The charts shown in illustration 3 and illustration 9 in this article are

available for personal use in the "Servicing Interchangeable Cores - Book One (Arrow-Best-Falcon)" available from this publication or the author. The slide chart shown in illustration 4, is available from Lab Security, Falcon Lock or the author.

Next month we will discuss various ways of removing the core from the housing and picking the core to the control shear line when the control key is not available. **TNL**



# THRU THE KEYHOLE

## A Peek at Movers & Shakers in the Industry

### ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in Thru The Keyhole? Please call Editor, Greg Mango, at (630) 837-2044.

### STI

Garnett L. Hegeman, Jr. recently retired after two distinguished careers, most recently as a magistrate for the State of Michigan. In an earlier career he was superintendent of schools in Inkster, Michigan.

He was principal of Inkster High School in suburban Detroit back in 1979 when he made his desperate request that was to have such a profound impact on the lives of so many people around the world.

"Jack, we need your help in stopping false fire alarms. They create havoc... which we don't need or want."

### Jack Who?

He was speaking to Jack Taylor, founder of Safety Technology International, Inc. of Waterford, Michigan. At the time Jack was



Jack Taylor, President of STI.

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owner/ operator of the burglar alarm company that maintained and monitored the alarm system for the high school and the two men shared a common interest in science and technology.

Jack was intrigued by the problem and appreciated the severity of it. As Garnett puts it now, "We were between a very large rock and a hard place."

### So Bad That...

"Things were so bad our custodian felt he had to disconnect our manual pull stations. Then a state fire marshal threatened me with jail if I didn't turn them back on. So, I did, of course. And the false alarms got progressively worse. We needed help."

An inventor by nature, Jack went to work on his friend's challenge. And the rest is history.

Today, the unique and patented STI Stopper ® II device is on duty helping stop false fire alarms in

schools, colleges, and training schools from coast to coast...as well as hotels/ motels, hospitals, nursing homes, correctional facilities, stores and commercial buildings of almost every type around the world.

### Stopper II remains No. 1

Safety Technology International, Inc. the company Jack founded has offices in Waterford, MI and Birmingham, England. STI is a recognized leader in the security/ fire alarm industry and now manufactures and markets more than 45 products to help stop false fire alarms, vandalism and theft of fire equipment. But Stopper II remains its number one seller.

During his long distinguished careers, Garnett Hegeman accomplished much. But for Jack Taylor, the men and women of STI and hundreds of thousands of others around the world, his most significant accomplishment came in the form of a desperate call for help. **TNL**



# Reed Report

**Q.** I have a padlock imprinted with "Wil-Boh". I can't get the cylinder out. Can you help?

**A.** This padlock made by Wilson Bohannon Company, requires you to remove the pins on the side of the padlock. Remove the last pin by drilling it out. At that time, just pick the lock to remove the cylinder.

**Q.** I attended your seminar in Montana and you gave out the trial combinations for Cole cabinets. Would you please give them to me again, as I can't find my copy?

**A.** Here are some of the trial combos to try on Cole cabinet products: 16-45-76, 41-70-01, 66-95-26, 91-20-51, 40-70-07, 18-40-70.

**Q.** What are the mobile home master key cuts for Weiser Locks? I know you have given them before, but I cannot find them anywhere.

**A.** Everywhere! This has probably been the most asked question in the last 10 years. Here goes, one more time:

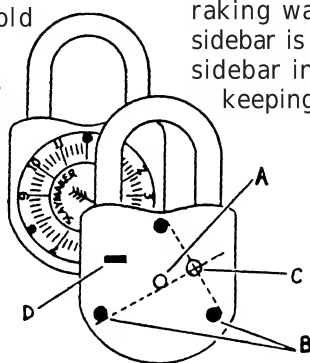
46557	68987	49789	69898	69797	47979
48987	69889	67889	47797	67999	49779
49788	46667	68986	48998	69778	49978
49997	48997	69777	49876	69999	

**Q.** I have quite a few Dudley combination locks. How can I get the combinations?

**A.** To get the combination for a Dudley combination padlock, drill a small hole between the letters "D" and "L" on the back of the lock. Line up the discs and read the combination. To repair, just put some solder in the hole. Dudley not only went out of business, they also left without a trace.

**Q.** How do I find the combination on an old Slaymaker Padlock?

**A.** Draw two lines on the back of the padlock as indicated by the dotted lines in drawing. Where the two lines intersect, drill a small hole. This hole will be placed on top of the locking dog. In the drawing, the point marked "A" is the shaft for the disks. The point marked "B" is the rivets holding the case together. The point marked "D" indicates where the shackle shelf is located. The point marked "C" is where the drilled hole should be.



Yours For Better Security,

*Bill Reed*  
Bill Reed

## Scatter Shooting while remembering ... Murray Kramer

**Q.** I have heard a great deal about the "Quick 8" tool. What is it, and how can I get one?

**A.** This tool is probably one of the most popular to come out in a long time. It removes the ignition lock on a Ford 8-cut without any damage. You can produce a first key and reassemble the lock in about 20 minutes. The tool is made of hardened steel and works great. Call me at 888-801-2003 and I'll tell you how to get one. Here's how it works!

**Tools Required:** Flat Head Screwdriver, Small Probe, Large Probe, Rake Pick, Hook Pick, Drill

**Step 1:** Insert a flat head screwdriver between the face cap and cylinder. Gently pry off the removable face cap. (No damage to cap.)

**Step 2:** Insert the jig flush into the core. Jig can only be inserted one way. (Guides will only fit into top two cavities.)

**Step 3:** Insert arbor into jig and drill approximately 1/4 inch. Back out arbor to remove chips from pilot hole and bit. Re-drill until arbor becomes flush with jig. Remove jig.

**Step 4:** Insert a hook pick into drilled hole and apply light tension to top of sidebar. Insert a rake into keyway and begin raking wafers. Sidebar will start to move inward. When sidebar is completely in, remove rake from wafers. Holding sidebar in with hook pick, turn cylinder clockwise while keeping light pressure on cylinder. Slowly remove pick from sidebar and turn lock clockwise to accessory. (Note: Buzzer Clip must be lifted up to complete turn.)

**Step 5:** To remove lock from steering column, snap face cap on plug and insert probe into access hole. Depress retainer and slide lock from column. (**Note:** Access hole is located at bottom of steering column.) **TRM**

If you have a question for Bill Reed, would like to talk to him concerning anything in this column, or want to attend a Bill Reed seminar at one of the locations listed below, you may contact Bill directly on his toll free number at: (888) 801-2003.

Aug. 1	Kansas City, MO	Oct. 17	Omaha, NE
Aug. 15	Memphis, TN	Nov. 7	Salt Lake City, UT
Sept. 26	New Braunfels, TX	Nov. 21	Tulsa, OK
Oct. 11	Chicago, IL	Dec. 5	Orlando, FL



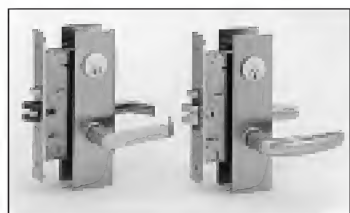
# BUSINESS BRIEFS

## Aiphone Appoints New Head of Marketing

Aiphone Intercom Systems has appointed Heidi Curnow as Marketing Manager, responsible for National Marketing and Promotions. Curnow will also act as the company liaison for all publications which Aiphone Intercom Systems advertises in.

For more information phone 425-455-0510, or fax 425-455-0510

## Marks USA Expands Custom Lockset Division



Marks USA has developed a product line which provides commercial locksets that meet and exceed the most stringent UL and BHMA/ANSI specifications. A brochure is now available listing detail specifications for available locksets which have been developed for New York City and Los Angeles School Systems, the Chicago and New York City Housing Authorities and other municipal and commercial applications.

For application assistance or brochure contact Marks USA at 516-225-5400 or FAX: 516-225-6136.

## American Lock® Adds Three New Regional Managers

American Lock Company announces the appointment of Tim Britt, Christopher Taylor, and Pete Miller as the three new regional managers in the company's Professional Security Group. All three can be reached by calling American Lock

headquarters in Crete, IL at 1-800-323-4568.

## Direct Security Supply Distributes DynaLock

Direct Security Supply has been selected as a DynaLock Corp. master distributor for the DynaLock product line of magnetic and electromechanical locking devices. Direct offers DynaLock's electronic hardware product lines in all available finishes, voltages and configurations.

## MLANJ Officers Announced

At the May 18, 1998 meeting of The Master Locksmiths Association of New Jersey, held at the Double Tree Hotel in Somerset, NJ, they announced their new officers for 1998-1999. They are as follows:

President:  
Daniel F. McGlynn, CML  
Vice President:  
Michael Ambrosi, CRL  
Secretary:  
Joseph Lavigne, CRL  
Treasurer:  
Patricia C. Carno, CPL  
Sargent At Arms:  
Thomas King  
Chaplan:  
Robert Cornine, CML  
Convention Vice-President:  
Charles Green, CRL

## DoorKing Appoints Chuck Fink

DoorKing Inc. has announced the opening of the company's newest satellite sales office, DoorKing Southeast, 1613 Fairmount Dr., Sebring, Florida 33870. At the same time DoorKing has announced the appointment of Chuck Fink as Regional Sales Manager for Florida, Mississippi, and Louisiana. Mr. Fink will be working out of the new sales office in Sebring and can be reached at 941-471-9339 or faxed at 941-471-3837.

## Continental Instruments Appoints Langbaum Associates

Continental Instrument LLC announces the appointment of Langbaum Associates as the representative for its full line of state-of-the-art Access Control systems. Langbaum will be responsible for a territory comprised of New York, New Jersey, Eastern Pennsylvania, Maryland, Virginia and the Washington DC area.

## Lockmasters' Training Information On Video

The new Lockmasters' video demonstrates the proper procedures for opening and repairing GSA Red Label security containers. Learn how to remove the dial, how to drill the container with the Mas-Hamilton X-07 lock and how to open the container using the hole saw method.

For more information contact Lockmasters at 1-800-654-0637.

## DynaLock Corp. Donates Training Materials

DynaLock Corp. has donated classroom training materials to Acme School in Worth, Illinois. The company has provided the schools' locksmith training program with an array of electric locking products. DynaLock also provides the security industry with training instructors and seminar speakers.

## American Security Distribution Introduces CD-Rom Catalog

American Security Distribution introduced its catalog on CD-Rom. Through the CD-ROM catalog, customers may utilize their computers to view a total of

30,000 items in three categories: lock and supply, access control and electronic security. Customers may order the CD-Rom by calling 800-854-8775.

## Detex Corporation Celebrates 75 Years

Founded in 1923, Detex Corporation is celebrating its 75th year of manufacturing high-quality industrial security hardware products and Watchtour systems.

Detex has continuously expanded its product line to include sophisticated security hardware products, access control products, and state-of-the-art electronic Watchtour systems.

## LSA Announces Election Results for 1998-2000

The Locksmith Security Association of Michigan (LSA) is pleased to present the officers who will carry the business of the association into the millennium. These well qualified members are:

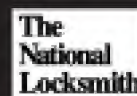
President:  
Mr. Jimmy Mowry  
Vice President:  
Mr. Larry Walker  
Secretary:  
Mr. Michael Buda  
Treasurer:  
Dr. Frances Katz  
Sargent at Arms:  
Mr. Robert Noble

## Meilink Names Grant Hart As Accounts Manager

Grant Hart is the newly appointed National Accounts Manager of Meilink Safe Company. Responsibilities will include the O.E.M. market, and the majority of the East and Gulf coast territories. Hart, who is a member of the American Society for Industrial Security, is bringing Meilink more than 14 years of industry experience.



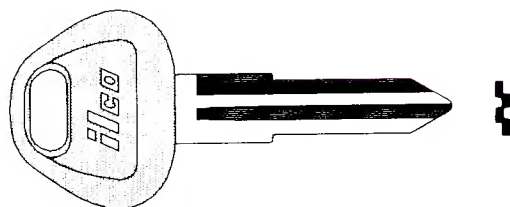




# KEY CODES

## Nissan Y0001-8000, Part 2

Key Blanks:  
 Curtis: DA28  
 Ilco: X124  
 Ilco: EZ: DA28  
 Jet: DA28  
 Silca: DAT14



Number of Cuts: 8

M.A.C.S.: 2

Key Gauged: Shoulder

Cut to Cut Spacings: .085"

Cut Depth Increments: .020"

Notes: Key is double sided. Same cuts on both sides.

Spacings:

1 - .118  
 2 - .203  
 3 - .288  
 4 - .373  
 5 - .458  
 6 - .543  
 7 - .628  
 8 - .713

HPC 1200CM  
 Code Card: XF67  
 Stop: Soulder

Framon:  
 Cuts Start at: .118  
 Spacing: .083  
 Block #: 5  
 Key Clamping Info:

Depths:

1 = .276  
 2 = .256  
 3 = .236  
 4 = .216

Curtis:  
 Cam: DM-3  
 Carriage: DM-3C

A-1 Pack-A-Punch  
 PAK-NSK

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## Y0001-8000, Part 2

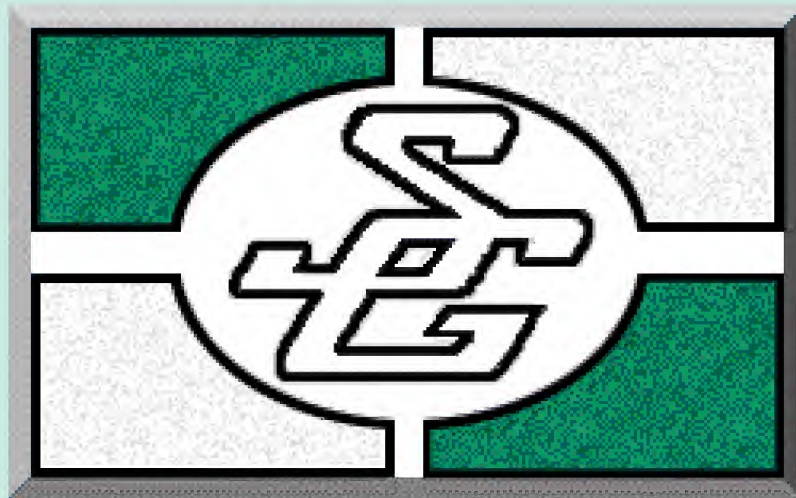
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# Nissan

## Y0001-8000, Part 2

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						Y4695	32442421	Y4724	34212231	Y4753	34422131



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## Y0001-8000, Part 2

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## Nissan

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Y5951	31243331	Y6015	43132113	Y6079	24323312						



**It's not safe  
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Y6167	12312122	Y6230	12321331	Y6293	42134244	Y6356	34432422	Y6419	11132233	Y6482	32113211
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Y7370	43133211	Y7434	33122124

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Y7435	32232431	Y7498	13322331	Y7561	31134321	Y7624	34312124	Y7687	11343224	Y7750	24432434
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## Nissan Y0001-8000, Part 2

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Y7876	24333311	Y7940	13221243		

TNL

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# The National Locksmith's

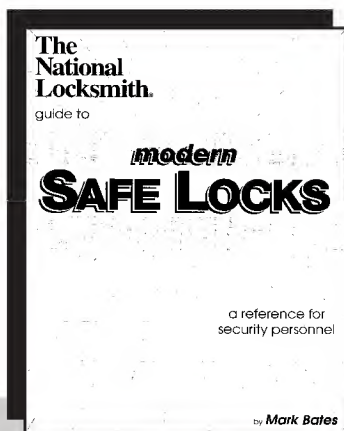
## September 1998 Planning Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	The National Locksmith Closed	8	9	10	11 T.A.O.L.'s 25th Anniversary Convention Sept 11-13 Scarborough, Ontario (888) 272-8265	12 Mas-Hamilton X-07 Course Sept 12-13 — San Diego, CA Auditcon System 2100 Course Sept 12 — Minneapolis, MN New Orleans, LA Sept 19 — Colorado Springs, CO San Francisco, CA (606) 253-4744 X180
T.A.O.L.'s 25th Anniversary Convention Scarborough, Ontario	7 Labor Day	14 Lockmasters Training — Professional Locksmithing Sept 14-25 Nicholasville, KY (800) 654-0637 Vindicator 40 Training Lexington, KY (606) 253-4744 X180	15	16	17 Doyle Lock Supply Dealer Trade Show & Education Sept 18-20 Plymouth, MN (800) 333-6953	18 Vindicator 40 Training Chicago, IL (606) 253-4744 X180 MBA Training — Defeating Dimple Key Locks & Combination Lock Tech. II, — Sept 19-20 Nicholasville, KY (888) 622-5495
Doyle Lock Supply Dealer Trade Show & Education Plymouth, MN Ozark Professional Locksmith Fall Clinics — Sept 19-20 Eureka Springs, AR (501) 524-3660	21 Rosh Hashanah	22	23	24	25 Mas-Hamilton X-07 Course Sept 25-26 Lexington, KY (606) 253-4744 X180 Mas-Hamilton Auditcon System 2100 Course — Detroit, MI (606) 253-4744 X180	26 Reed Seminar New Braunfels, TX (888) 801-2003 Mas-Hamilton Auditcon System 2100 Course — Billings, MT, Boston, MA
27	28 Lockmasters Training — 5 Day GSA Training Sept 28-Oct 2 Nicholasville, KY (800) 654-0637	29	30 Yom Kippur			



ASP Covers  
the World of  
Auto Locks





This material was excerpted from the Mark Bates book titled Modern Safe Locks. The book covers combination operating and changing procedures for virtually every combination lock both mechanical and electronic, that you will encounter on a daily basis. Modern Safe Locks is available for purchase through **The National Locksmith**.

## Precision

<b>MODEL:</b>	<b>P67 (1989 to late 1990)</b>
<b>DESCRIPTION:</b>	Three wheel, key changeable combination safe lock. Dial is numbered 0 to 99 clockwise. Regular change.
<b>RATINGS:</b>	UL Group 2
<b>FACTORY COMBINATION:</b>	4XL to 50, 1XR to open.
<b>OPENING PROCEDURES:</b>	<p><b>WHEN SET TO A 3 NUMBER COMBINATION:</b></p> <ul style="list-style-type: none"> <li>a. 4XL to 10</li> <li>b. 3XR to 20</li> <li>c. 2XL to 30</li> <li>d. 1XR to stop (96)</li> </ul>
<b>TO LOCK:</b>	Turn dial left 4 times.
<b>CHANGING PROCEDURE:</b>	<p><b>WITH THE SAFE DOOR OPEN...</b></p> <ul style="list-style-type: none"> <li>a. Dial the existing combination to the changing index (steps a through c under "Opening Procedures").</li> <li>b. Insert change key and turn it left 1/4 turn.</li> <li>c. Dial new combination to the changing index (steps a through c under "Opening Procedures").</li> <li>d. Turn change key right 1/4 turn and remove it.</li> <li>e. Test combination at opening index (steps a through d under "Opening Procedures").</li> </ul>
<b>TOOLS NEEDED:</b>	Precision change key No. P672.
<b>NOTES:</b>	Ilco acquired the Precision company around 1990. The original Precision change key is no longer available, but an Ilco #67-021 or S&G U8 will substitute nicely.



## Precision



Precision P67







# Suggestive Sales for Safe Techs

by Ray Hearn

**"Would you like a large order of fries with your hamburger and Coke?" I am sure you have heard that from the order taker at your favorite fast food stop, but have you ever wondered why? Because it works! The average person finds it easy to say yes to a suitable item presented in the right way, and it is a lesson that can add to our bottom line as safe technicians.**

**As locksmiths we have door viewers, extra keys, door closers, and key chains to sell to a customer so the ticket total could be improved. To be an expert safe technician you need a bag of add-ons to increase your sales while you are making yourself invaluable to your customer.**

**I have a couple general categories of products that can do just the trick for you and your customers.**



## Cash Handling Products

Plastic or metal rolled coin trays. Trays that are end marked with the denomination of the rolled coins as well as the value of a full tray.

**Selling Point:** Quicker safe count, more organized use of storage space

Plastic coin counting tubes. Drop a handful of coins in the funnel shaped tube and pour off any excess through a slit in the top and you have an exact roll of coins.

**Selling Point:** Quick preparation of coin rolls or verification of incoming rolled coins.

Paper pre-rolled coin wrappers for counting tubes. Wrappers are roll crimped at one end ready to slip over coins in counting tube, supply items are a continuing profit center.

**Selling Point:** Allows a roll of coins to be prepared in less than 10 seconds.

Plastic security deposit bags. Adhesive or heat sealable bags are tamper proof after sealed and serial numbered to assure deposit is undisturbed in safe and in transit until received by bank. Supply items are a continuing profit center.

**Selling Point:** Count can not be affected by person or agent delivering deposit to bank without being detected, protection for person that delivers bag to bank.

## Enhancement to Safe

Electronic locks. Allow user whatever level of security or ease of operation they require.

**Selling Point:** Ease of entry, audit trail, remote activation if needed.

Media converter. Converts a safe into a media storage for videotapes, microfilm, or computer discs or backup tapes.

**Selling Point:** Prevents damage to these vital records in case of a fire by providing the more controlled environment they require for safekeeping.

Bolt down kit. Provides the proper means of attaching the safe to building floor.

**Selling Point:** Prevents or delays

thieves removing the safe from the location.

Now that I have you thinking like a hamburger magnate, maybe you can come up with a few safe sale add-ons of your own. Don't be afraid to offer your customer an extra product, it just may convince him that you really are the expert.

The next time you sell a safe, sell more than a safe. Sell supplies and accessories for a long term return.

**All the products mentioned can be purchased from the following companies:**

MMF Industries, 370 Alice St., Wheeling, IL 60090-5891, (708) 537-7890  
Coin counting tubes and trays, pre-formed coin wrappers.

Cincy Safe Co., 4385 Creek Rd., Cincinnati, OH 45241-2923, (513) 793-5635  
Security deposit envelopes and some very nice safes featuring the Vindicator electronic lock.

LaGard Inc., 3330 1 Kashiwa Street, Torrance, CA 90505, (310) 325-5670  
Electronic and time delay locks. Order from your distributor.

Vindicator Corp, 300 1 Bee Cave Rd., Austin, TX 78746, (512) 314-1200  
Electronic locks including audit trail. Order from your distributor.

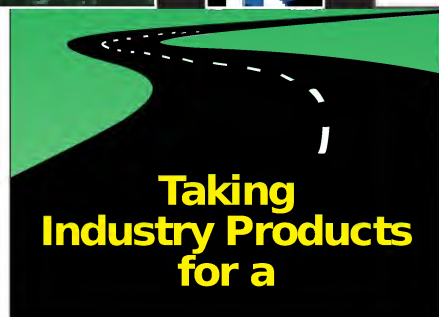
MasHamilton Group, 805-D Newtown Cirde, Lexington, KY 40511, (606) 253-4744  
Electronic self powered locks including military grade, and several audit trail, and dual custody models.

Sargent & Greenleaf Inc., 1 Security Dr., Nicholasville, KY 40356-2159, (606) 885-9411  
Electronic locks including time delay timed access, remote access, and keypad entry. Available from most distributors.

Fireking, P.O. Box 559, New Albany, IN 47151, 1(800) MEILINK  
Media converter for storage of computer disks, film, microfilm, and backup tapes.

**TNL**





## TEST DRIVE!

**A**lways on the cutting edge of safe servicing tools and safe related education, Lockmasters is broadening its product line and is now offering specialized tools other than safe related products. "The Keyless Garage Entry Tool" is one of them.

### PRODUCT:

The Keyless Garage Entry Tool is designed to unlock virtually any overhead residential garage door that utilizes an automatic electric garage door opener. It will open just about any brand opener in less than a minute and no special skills are required.

When you first see the tool, it looks like a car opening tool and wonder how it works on garage doors. Once you see it work, and realize the simplicity, you will wonder why you didn't think of the idea.

### CONSTRUCTION:

Made from spring steel, the Keyless Garage Entry tool resembles an oversized car opening tool. In fact, I would bet that with a little ingenuity and creativeness, this tool could probably double as a car opening tool on some models.

### OPERATION:

All electric garage door openers have an emergency release that will disengage the arm attached to the door from the drive chain or drive shaft. This allows manual opening of the door should the opener fail or malfunction. The object of The Keyless Garage Entry Tool, is to grab and pull the emergency release rope inside the garage on the automatic opener and disengaging

the linkage allowing the door to be manually lifted.

To use The Keyless Garage Entry Tool you stand in the center of the door and insert the tool at the top of the door, just to the right or left of the vertical centerline. If the door is too tight a relieve can be created by pushing against the door while maneuvering the tool. Due to the flexibility of the tool, as it is inserted through the top of the door it will arch towards the release rope.

After the tool is inserted, move the hooked end towards the emergency release rope. Catch the rope in the hook and pull. This action should release the linkage allowing the door to be opened.

As you lift the door, leave the tool attached to the pull rope and it will be pulled into the garage where it can be retrieved. The linkage can then be snapped back into position and the garage door opener will operate as designed. The use of this tool does require a little practice, but once you get the hang of it, it does work.

## The Keyless Garage Entry Tool

*by Lockmasters*



### CONCLUSION:

This is a clever tool that is so simple to use it is sure to cause a stir. As always the cleverest tools are usually the simplest in design, function and operation, and this is no exception. With a little creativity and design a new method to bypass a door is created.

Lockmasters is always looking for new and innovative tools to add to its product line. The Keyless Garage Entry Tool is no exception.

If you've been looking for an easy way to defeat overhead garage door openers, this is it.

### PRICE:

The price of The Keyless Garage Entry Tool is \$19.95.

### CONTACT:

Lockmasters  
5085 Danville Rd.  
Nicholasville, KY 40356  
Phone: 800-654-0637  
Fax: (606) 885-7093  
E-Mail: salesinfo@lockmasters.com



### IN SUMMARY:

**DESCRIPTION:** The Keyless Garage Entry Tool is designed to unlock virtually any overhead residential garage door that utilizes an automatic electric garage door opener.

**COMMENTS:** When you first see the tool, it looks like a car opening tool and wonder how it works on garage doors.

**PRICE:** \$19.95

**TEST DRIVE RESULTS:** An innovative approach to opening overhead garage doors.